math Antics Worksheets

Name:

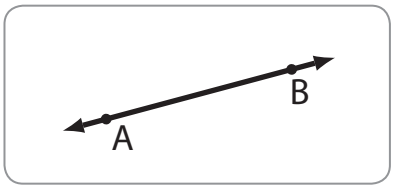
Date:

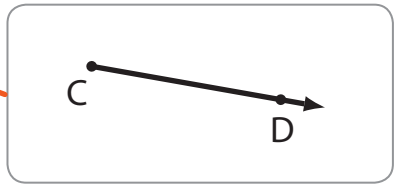
Basic Elements of Geometry

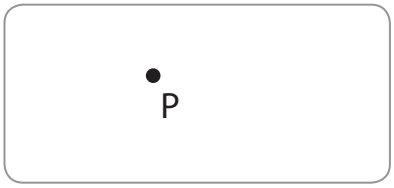
G-PLP 1

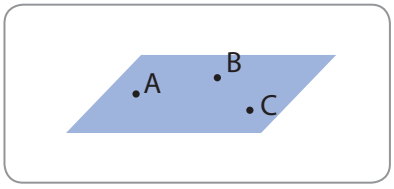
Instructions: Match each basic element of geometry with the correct picture.

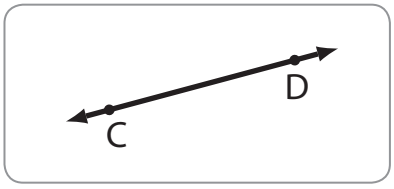
1. $\overrightarrow{CD}$
2. Line AB
3. Ray AB
4. $\overline{CD}$
5. Point P
6. Line Segment AB
7. Plane ABC
8. $\overleftrightarrow{CD}$

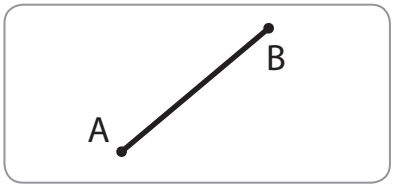


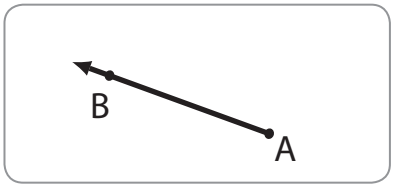












math Antics Worksheets

Name:

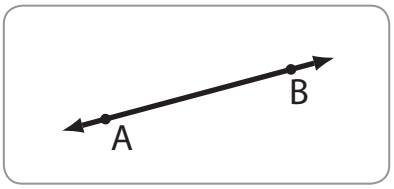
Date:

Basic Elements of Geometry (alternate)

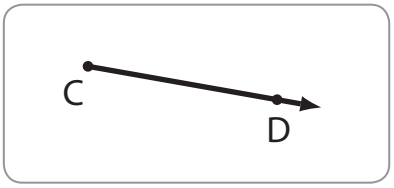
G-PLP 1

Instructions: Match each basic element of geometry with the correct picture by writing the number in the right box.

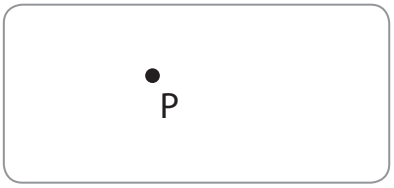
1. $\overrightarrow{CD}$ [ ]



2. Line AB [1]

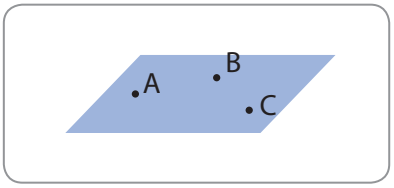


3. Ray AB [ ]

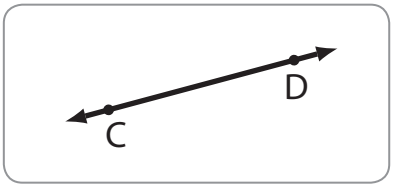


4. $\overline{CD}$ [ ]

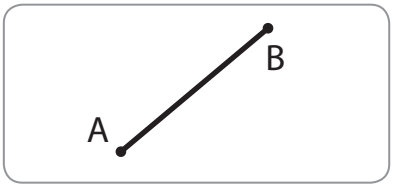
5. Point P [ ]



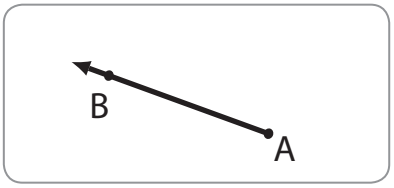
6. Line Segment AB [ ]



7. Plane ABC [ ]



8. $\overleftrightarrow{CD}$ [ ]



math Antics Exercises

Name: _____

Date: _____

Points, Lines and Planes

1 Fill in the blank.

This is a _____

2 Fill in the blank.

This is a _____ _____

3 Fill in the blank.

This is a _____

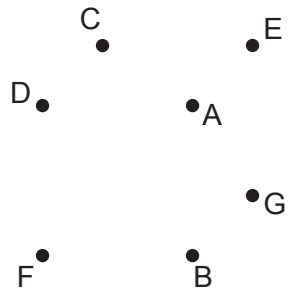
4 Draw a ray and label it AB.

5 Draw a line segment and label it CD.

6 Draw a line and label it EF.

7 Draw line segments from:

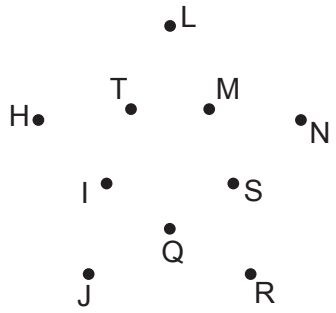
Point A to Point B
Point E to Point C
Point G to Point B
Point F to Point B
Point A to Point E
Point D to Point F
Point C to Point D
Point D to Point A
Point E to Point G



How many dimensions does this object have? _____

8 Draw line segments from:

Point H to Point I
Point I to Point J
Point L to Point M
Point M to Point N
Point Q to Point R
Point R to Point S
Point H to Point T
Point T to Point L
Point J to Point Q
Point S to Point N



How many dimensions does this object have? _____

math Antics Worksheets

Name:

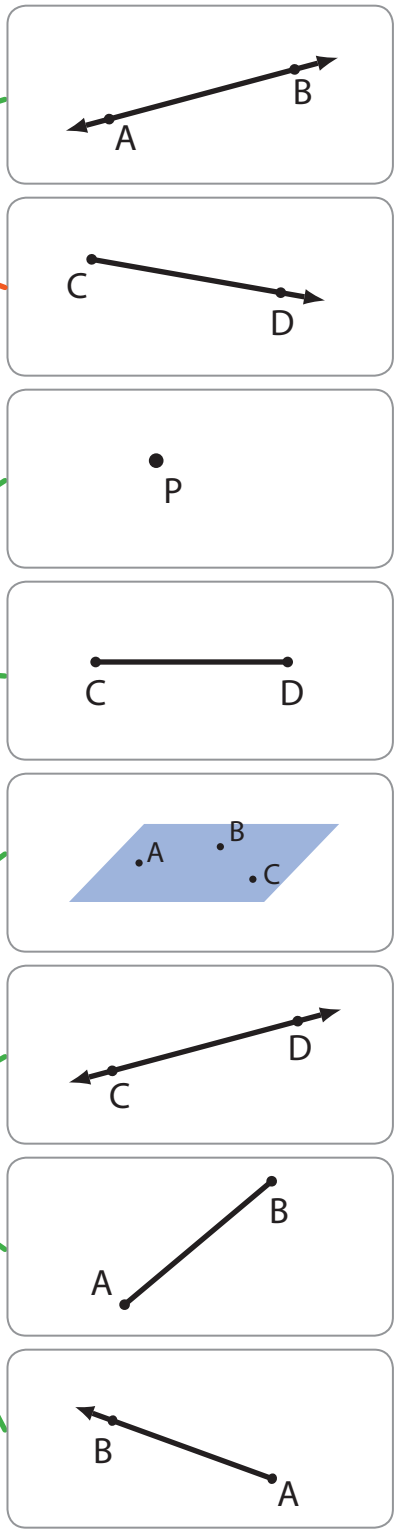
Date:

Basic Elements of Geometry

G-PLP 1

Instructions: Match each basic element of geometry with the correct picture.

1. $\overrightarrow{CD}$
2. Line AB
3. Ray AB
4. $\overline{CD}$
5. Point P
6. Line Segment AB
7. Plane ABC
8. $\overleftrightarrow{CD}$



math Antics Worksheets

Name:

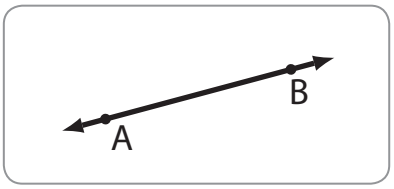
Date:

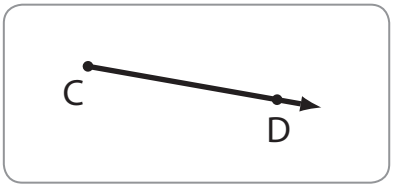
Basic Elements of Geometry (alternate)

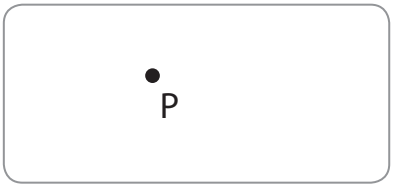
G-PLP 1

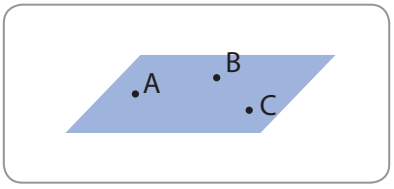
Instructions: Match each basic element of geometry with the correct picture by writing the number in the right box.

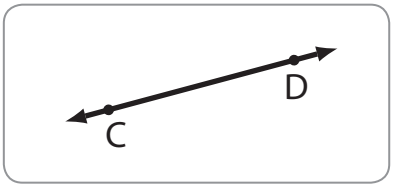
1. $\overrightarrow{CD}$
2. Line AB
3. Ray AB
4. $\overline{CD}$
5. Point P
6. Line Segment AB
7. Plane ABC
8. $\overleftrightarrow{CD}$

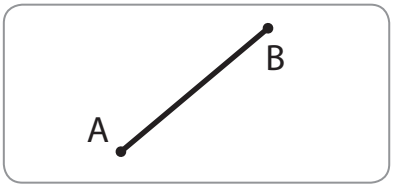


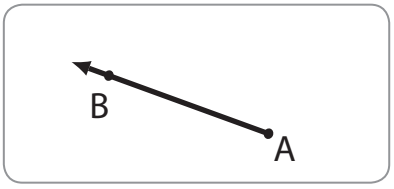












math Antics
Exercises

Name:

Date:

Points, Lines and Planes

1 Fill in the blank.

This is a ray

2 Fill in the blank.

This is a line segment

3 Fill in the blank.

This is a line

4 Draw a ray and label it AB.

drawing will vary

5 Draw a line segment and label it CD.

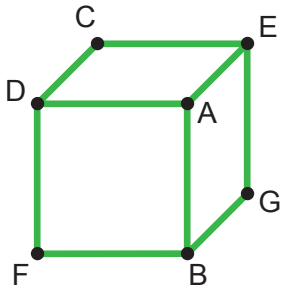
drawing will vary

6 Draw a line and label it EF.

drawing will vary

7 Draw line segments from:

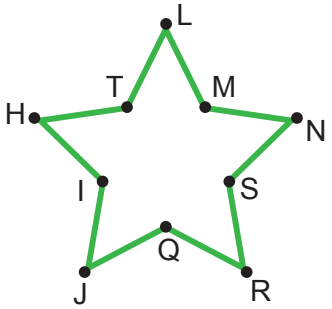
Point A to Point B
Point E to Point C
Point G to Point B
Point F to Point B
Point A to Point E
Point D to Point F
Point C to Point D
Point D to Point A
Point E to Point G



How many dimensions does this object have? 3

8 Draw line segments from:

Point H to Point I
Point I to Point J
Point L to Point M
Point M to Point N
Point Q to Point R
Point R to Point S
Point H to Point T
Point T to Point L
Point J to Point Q
Point S to Point N



How many dimensions does this object have? 2

See Video for step-by-step solutions to each problem.

math Antics Worksheets

Name:

Date:

Types of Angles

G-AB 1

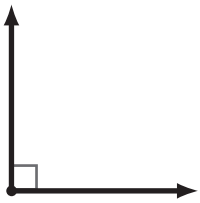
Instructions: For each angle, mark the box that matches its type.

1

- [x] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Straight

2

- [ ] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Straight



3

- [ ] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Straight

4

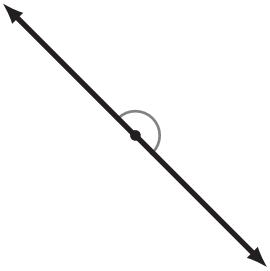
- [ ] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Straight

5

- [ ] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Straight

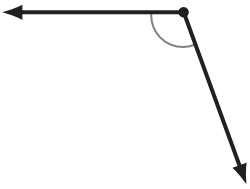
6

- [ ] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Straight



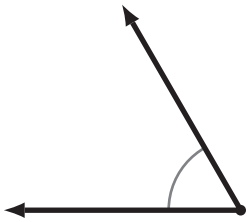
7

- [ ] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Straight



8

- [ ] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Straight



math Antics Worksheets

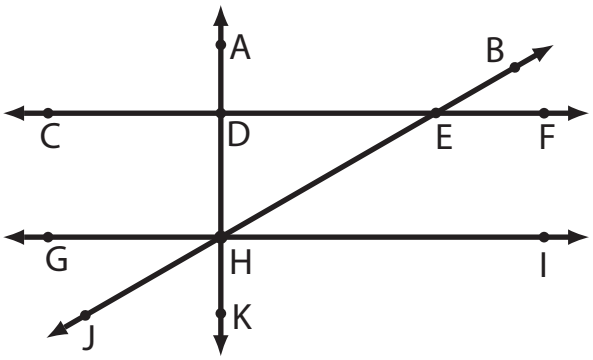
Name:

Date:

Identifying Geometric Elements

G-AB 2

Instructions: Use this diagram to answer the questions below. Circle 'true' or 'false'.



1. $\overleftrightarrow{CF}$ and $\overleftrightarrow{GI}$ are parallel lines. ..... **True** ..... **False**
2. ∠EHI is an acute angle. ..... **True** ..... **False**
3. ∠ADE is an acute angle. ..... **True** ..... **False**
4. $\overleftrightarrow{KA}$ and $\overleftrightarrow{JB}$ are perpendicular. ..... **True** ..... **False**
5. ∠DEB is an obtuse angle. ..... **True** ..... **False**
6. ∠ADE is a right angle. ..... **True** ..... **False**
7. ∠GHE is a right angle. ..... **True** ..... **False**
8. ∠JHG and ∠JHK are complementry. ..... **True** ..... **False**
9. ∠BEF and ∠FEH are supplementary. ..... **True** ..... **False**
10. ∠DHI is a right angle. ..... **True** ..... **False**
11. ∠GHJ and ∠KHI are supplementary. ..... **True** ..... **False**
12. $\overleftrightarrow{KA}$ and $\overleftrightarrow{CF}$ are perpendicular. ..... **True** ..... **False**
13. Points D, E and H form a plane. ..... **True** ..... **False**
14. Points C, D and E form a plane. ..... **True** ..... **False**

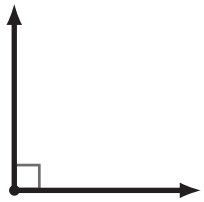
math Antics
Exercises

Name: _____

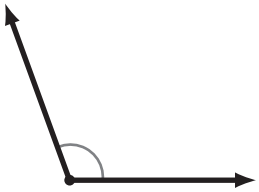
Date: _____

Angle Basics

1 What kind of angle is this? _____



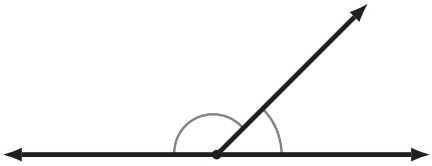
2 What kind of angle is this? _____



3 What kind of angle is this? _____

4 What kind of angle is this? _____

5 This diagram shows:

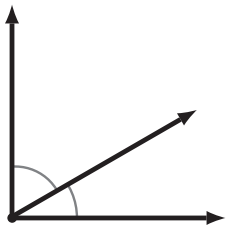


- ☐ **Parallel Lines**
- ☐ **Perpendicular Lines**
- ☐ **Supplementary Angles**
- ☐ **Complementary Angles**

6 This diagram shows:

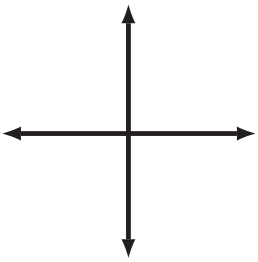
- ☐ **Parallel Lines**
- ☐ **Perpendicular Lines**
- ☐ **Supplementary Angles**
- ☐ **Complementary Angles**

7 This diagram shows:



- ☐ **Parallel Lines**
- ☐ **Perpendicular Lines**
- ☐ **Supplementary Angles**
- ☐ **Complementary Angles**

8 This diagram shows:



- ☐ **Parallel Lines**
- ☐ **Perpendicular Lines**
- ☐ **Supplementary Angles**
- ☐ **Complementary Angles**

math Antics Worksheets

Name:

Date:

Types of Angles

G-AB 1

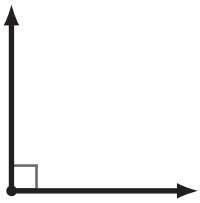
Instructions: For each angle, mark the box that matches its type.

1

- [x] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Straight

2

- [ ] Acute
- [x] Right
- [ ] Obtuse
- [ ] Straight



3

- [ ] Acute
- [ ] Right
- [x] Obtuse
- [ ] Straight

4

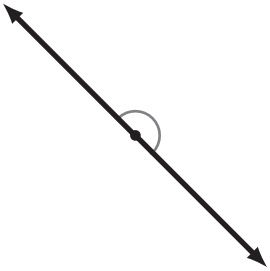
- [x] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Straight

5

- [ ] Acute
- [x] Right
- [ ] Obtuse
- [ ] Straight

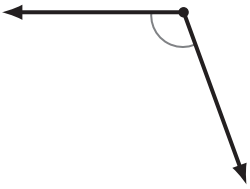
6

- [ ] Acute
- [ ] Right
- [ ] Obtuse
- [x] Straight



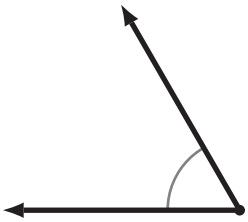
7

- [ ] Acute
- [ ] Right
- [x] Obtuse
- [ ] Straight



8

- [x] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Straight



math Antics Worksheets

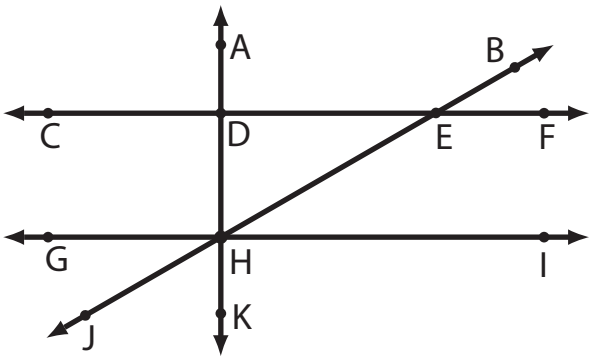
Name: _____

Date: _____

Identifying Geometric Elements

G-AB 2

Instructions: Use this diagram to answer the questions below. Circle 'true' or 'false'.



1	$\overleftrightarrow{CF}$ and $\overleftrightarrow{GI}$ are parallel lines.	**True**	False
2	∠EHI is an acute angle.	**True**	False
3	∠ADE is an acute angle.	True	**False**
4	$\overleftrightarrow{KA}$ and $\overleftrightarrow{JB}$ are perpendicular.	True	**False**
5	∠DEB is an obtuse angle.	**True**	False
6	∠ADE is a right angle.	**True**	False
7	∠GHE is a right angle.	True	**False**
8	∠JHG and ∠JHK are complementry.	**True**	False
9	∠BEF and ∠FEH are supplementary.	**True**	False
10	∠DHI is a right angle.	**True**	False
11	∠GHJ and ∠KHI are supplementary.	True	**False**
12	$\overleftrightarrow{KA}$ and $\overleftrightarrow{CF}$ are perpendicular.	**True**	False
13	Points D, E and H form a plane.	**True**	False
14	Points C, D and E form a plane.	True	**False**

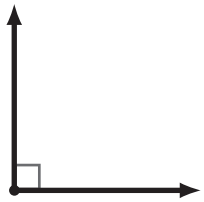
math Antics Exercises

Name:

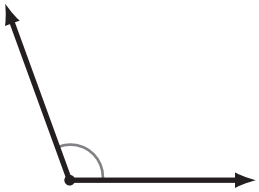
Date:

Angle Basics

1 What kind of angle is this? right



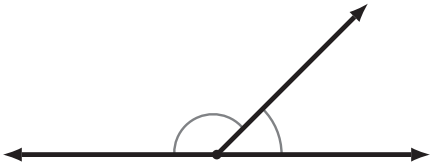
2 What kind of angle is this? obtuse



3 What kind of angle is this? acute

4 What kind of angle is this? straight

5 This diagram shows:

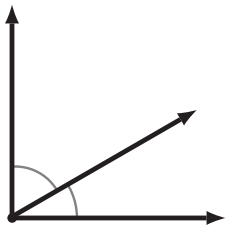


- [ ] Parallel Lines
- [ ] Perpendicular Lines
- [x] Supplementary Angles
- [ ] Complementary Angles

6 This diagram shows:

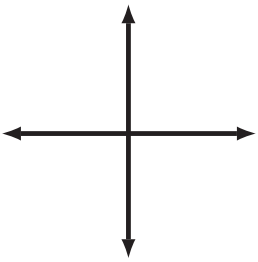
- [x] Parallel Lines
- [ ] Perpendicular Lines
- [ ] Supplementary Angles
- [ ] Complementary Angles

7 This diagram shows:



- [ ] Parallel Lines
- [ ] Perpendicular Lines
- [ ] Supplementary Angles
- [x] Complementary Angles

8 This diagram shows:



- [ ] Parallel Lines
- [x] Perpendicular Lines
- [ ] Supplementary Angles
- [ ] Complementary Angles

See Video for step-by-step solutions to each problem.

math Antics Worksheets

Name:

Date:

Measuring Angles

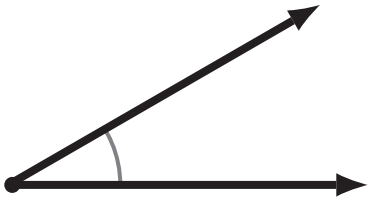
G-AAD 1

Instructions: Use a protractor to measure how many degrees each angle is. If you don't have a protractor, then just estimate and see how close you got.

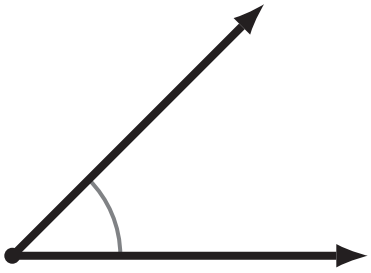
1

15°

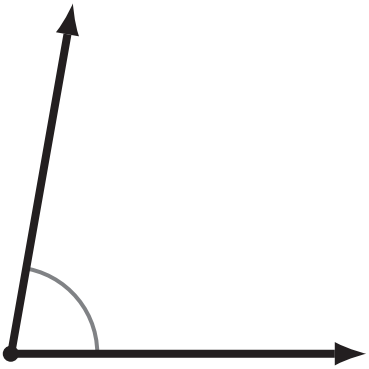
2



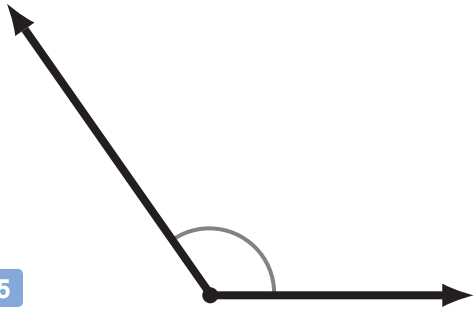
3



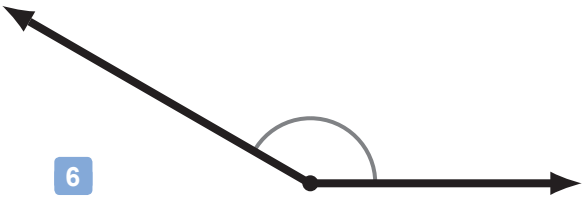
4



5



6



math Antics Worksheets

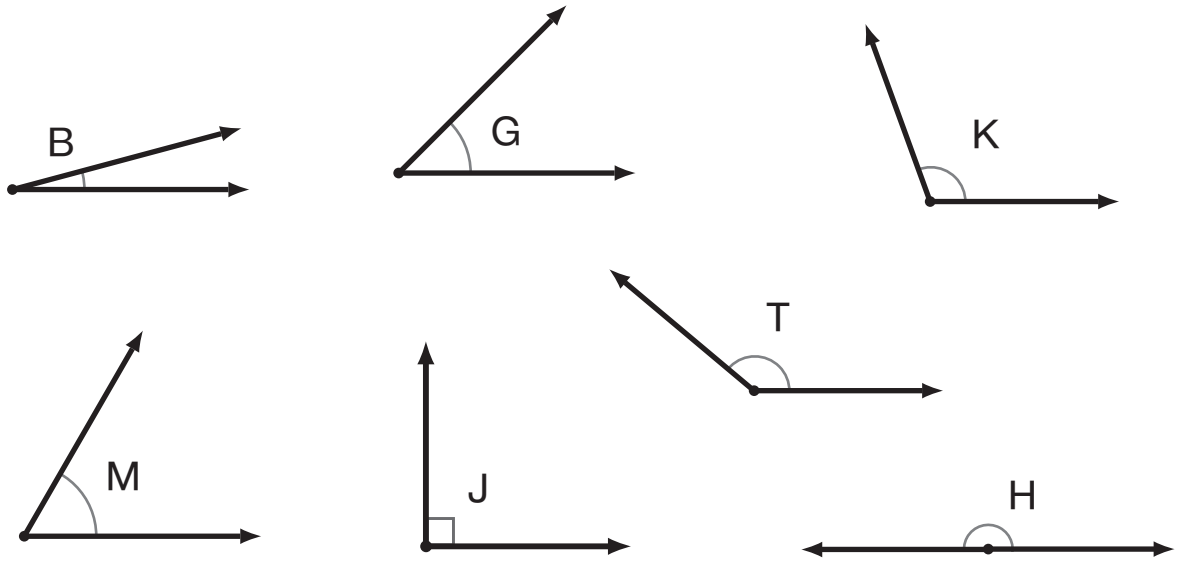
Name:

Date:

Comparing Angles

G-AAD 2

Instructions: Use the greater-than '>' and less-than '<' signs to compare these angles. (If you have trouble comparing the angles visually, you can use a protractor to measure them.)



1. ∠B < ∠G
2. ∠J ◯ ∠G
3. ∠M ◯ ∠B
4. ∠T ◯ ∠H
5. ∠J ◯ ∠K
6. ∠J ◯ ∠H
7. ∠T ◯ ∠M
8. ∠K ◯ ∠G
9. ∠G ◯ ∠M
10. ∠T ◯ ∠K

math Antics Worksheets

Name: _____

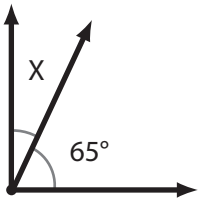
Date: _____

Finding an Unknown Angle

G-AAD 3

Instructions: For each set of complementary or supplementary angles, find the unknown angle (X).

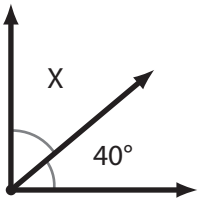
1



m∠X = 25°

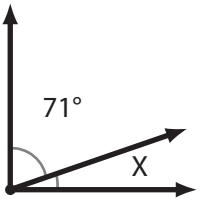
8 1
90
- 65
25

2



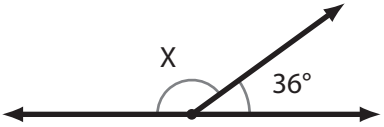
m∠X = _____

3



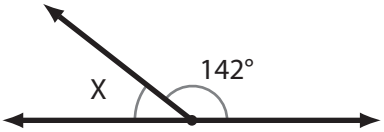
m∠X = _____

4



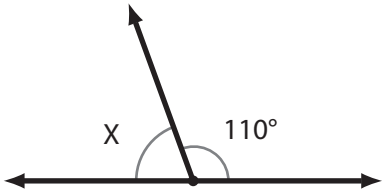
m∠X = _____

5



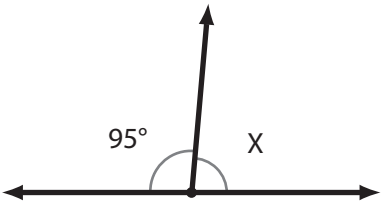
m∠X = _____

6



m∠X = _____

7



m∠X = _____

math Antics Worksheets

Name: _____

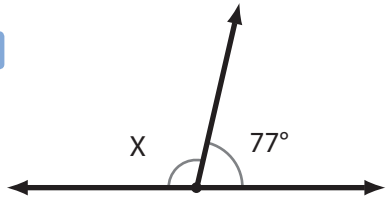
Date: _____

Finding an Unknown Angle - Set 2

G-AAD 4

Instructions: For each set of complementary or supplementary angles, find the unknown angle (X).

1

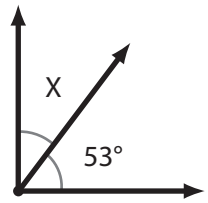


m∠X = _____

2

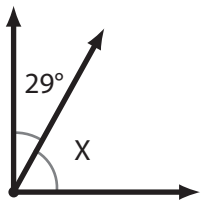
m∠X = _____

3



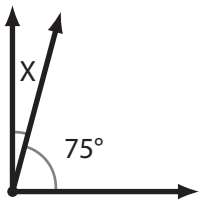
m∠X = _____

4



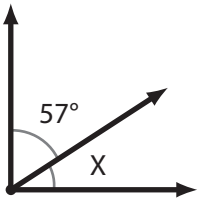
m∠X = _____

5



m∠X = _____

6



m∠X = _____

math Antics Worksheets

Name: _____

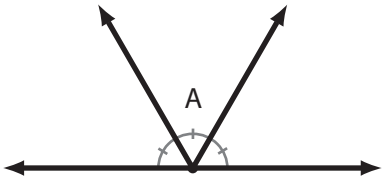
Date: _____

Finding an Unknown Angle - Set 3

G-AAD 5

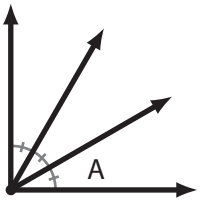
Instructions: Find the unknown angle (A). These problems are a little more tricky, so if you have trouble, ask someone for help or check the answer key to see the solutions.

1 This supplementary angle is divided into three **equal** parts.



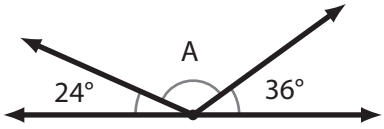
m∠A = _____

2 This complementary angle is divided into three **equal** parts.



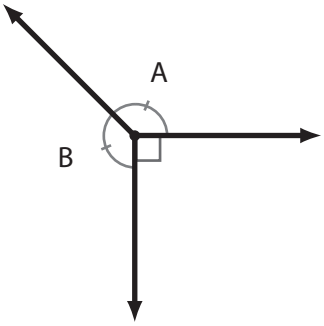
m∠A = _____

3



m∠A = _____

4 m∠A = m∠B



m∠A = _____

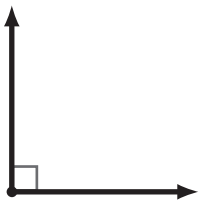
math Antics
Exercises

Name:

Date:

Angles and Degrees

1 What is the size of this angle in degrees?

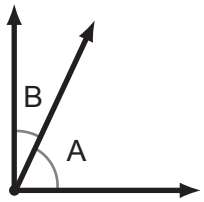


_____

2 What is the size of this angle in degrees?

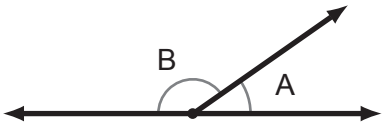
_____

3 Find the unknown angle.



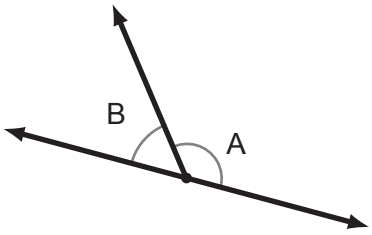
∠A and ∠B are complementary angles.
If ∠A is 65 degrees, how big is ∠B ?

4 Find the unknown angle.



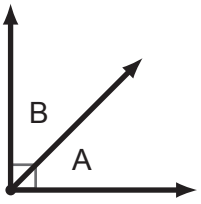
∠A and ∠B are supplementary angles.
If ∠A is 35 degrees, how big is ∠B ?

5 Find the unknown angle.



If ∠A is 128 degrees, how big is ∠B ?

6 Find the unknown angle.



If ∠A is the same size as ∠B ,
how big is ∠A ?

math Antics Worksheets

Name:

Date:

Measuring Angles

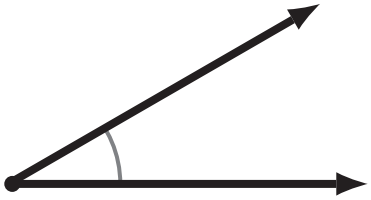
G-AAD 1

Instructions: Use a protractor to measure how many degrees each angle is. If you don't have a protractor, then just estimate and see how close you got.

1

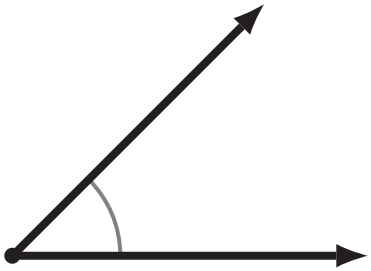
15°

2



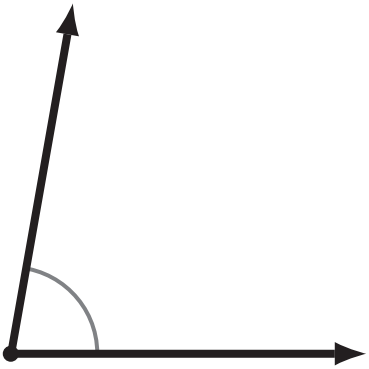
30°

3



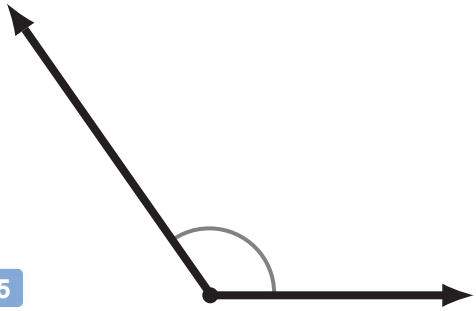
45°

4



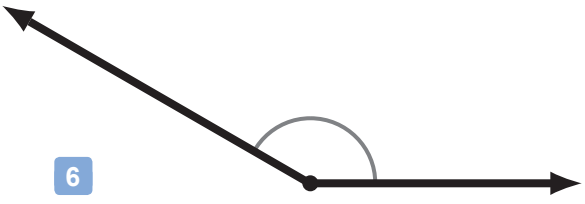
80°

5



125°

6



150°

math Antics Worksheets

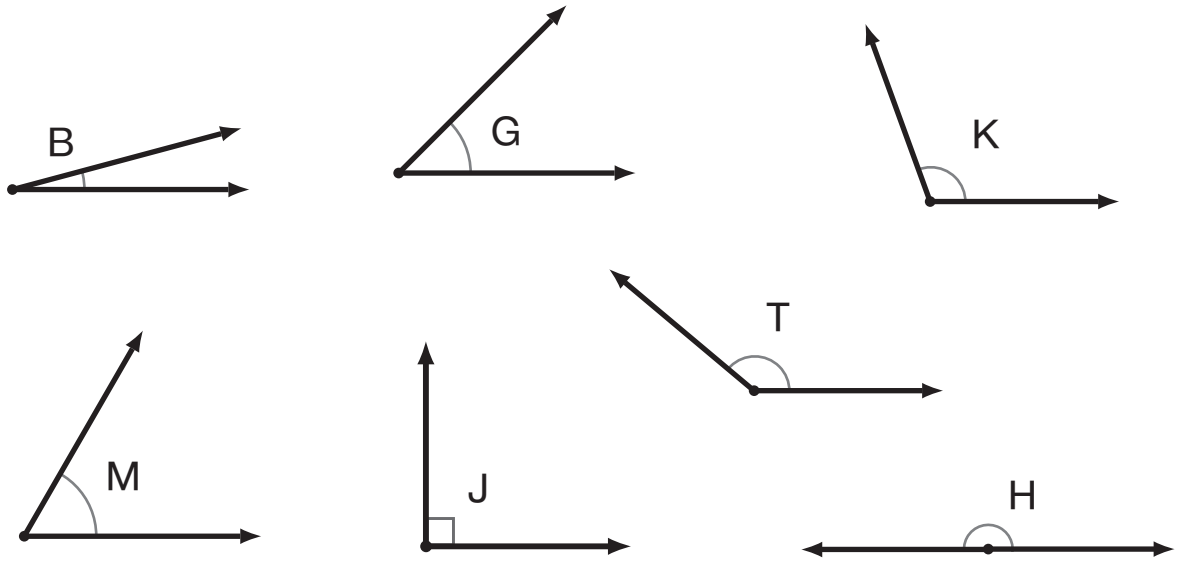
Name:

Date:

Comparing Angles

G-AAD 2

Instructions: Use the greater-than '>' and less-than '<' signs to compare these angles. (If you have trouble comparing the angles visually, you can use a protractor to measure them.)



1. ∠B < ∠G
2. ∠J > ∠G
3. ∠M > ∠B
4. ∠T < ∠H
5. ∠J < ∠K
6. ∠J < ∠H
7. ∠T > ∠M
8. ∠K > ∠G
9. ∠G < ∠M
10. ∠T > ∠K

math Antics Worksheets

Name:

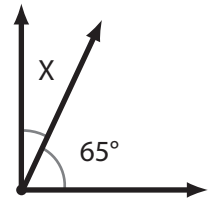
Date:

Finding an Unknown Angle

G-AAD 3

Instructions: For each set of complementary or supplementary angles, find the unknown angle (X).

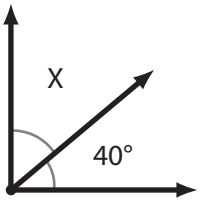
1



m∠X = 25°

$$\begin{array}{r} {\scriptstyle 8\ 1}\\ 90\\ -\ 65\\ \hline 25 \end{array}$$

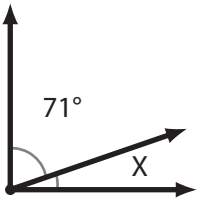
2



m∠X = 50°

$$\begin{array}{r} 90\\ -\ 40\\ \hline 50 \end{array}$$

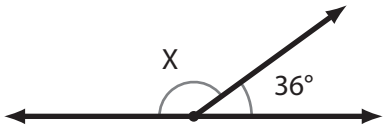
3



m∠X = 19°

$$\begin{array}{r} {\scriptstyle 8\ 1}\\ 90\\ -\ 71\\ \hline 19 \end{array}$$

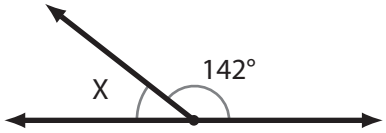
4



m∠X = 144°

$$\begin{array}{r} {\scriptstyle 7}\\ 180\\ -\ 36\\ \hline 144 \end{array}$$

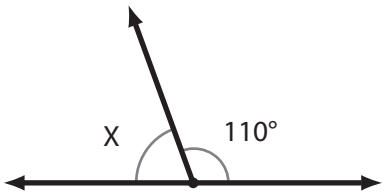
5



m∠X = 38°

$$\begin{array}{r} {\scriptstyle 7}\\ 180\\ -142\\ \hline 38 \end{array}$$

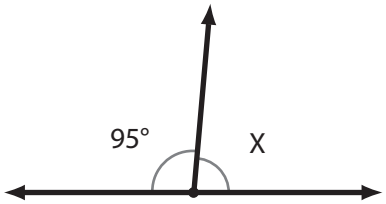
6



m∠X = 70°

$$\begin{array}{r} 180\\ -110\\ \hline 70 \end{array}$$

7



m∠X = 85°

$$\begin{array}{r} {\scriptstyle 17}\\ 180\\ -\ 95\\ \hline 85 \end{array}$$

math Antics Worksheets

Name:

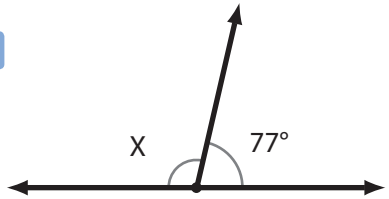
Date:

Finding an Unknown Angle - Set 2

G-AAD 4

Instructions: For each set of complementary or supplementary angles, find the unknown angle (X).

1



m∠X = 103°

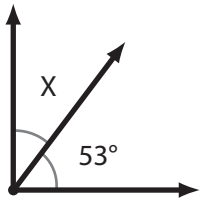
$$\begin{array}{r} {}^{7}\cancel{1}{}^{1}\cancel{8}0 \\ -\ 77 \\ \hline 103 \end{array}$$

2

m∠X = 18°

$$\begin{array}{r} {}^{7}\cancel{1}{}^{1}\cancel{8}0 \\ -\ 162 \\ \hline 18 \end{array}$$

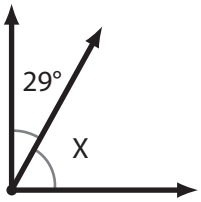
3



m∠X = 37°

$$\begin{array}{r} {}^{8}\cancel{9}{}^{1}0 \\ -\ 53 \\ \hline 37 \end{array}$$

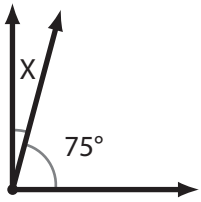
4



m∠X = 61°

$$\begin{array}{r} {}^{8}\cancel{9}{}^{1}0 \\ -\ 29 \\ \hline 61 \end{array}$$

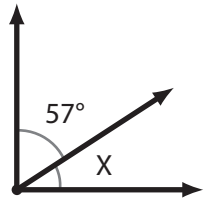
5



m∠X = 15°

$$\begin{array}{r} {}^{8}\cancel{9}{}^{1}0 \\ -\ 75 \\ \hline 15 \end{array}$$

6



m∠X = 33°

$$\begin{array}{r} {}^{8}\cancel{9}{}^{1}0 \\ -\ 57 \\ \hline 33 \end{array}$$

math Antics Worksheets

Name: _____

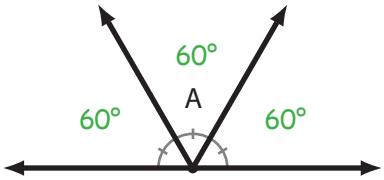
Date: _____

Finding an Unknown Angle - Set 3

G-AAD 5

Instructions: Find the unknown angle (A). These problems are a little more tricky, so if you have trouble, ask someone for help or check the answer key to see the solutions.

1 This supplementary angle is divided into three **equal** parts.



m∠A = 60°

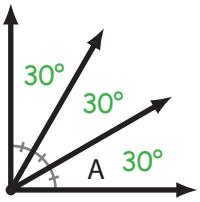
3A = 180°

so

A = 180 ÷ 3

A = 60

2 This complementary angle is divided into three **equal** parts.



m∠A = 30°

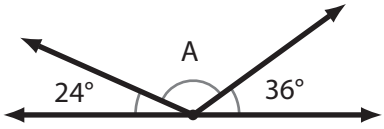
3A = 90°

so

A = 90 ÷ 3

A = 30

3



m∠A = 120°

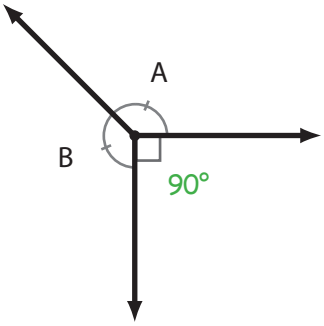
A + 24 + 36 = 180°

A + 60 = 180°

A = 180 - 60

A = 120

4 m∠A = m∠B



m∠A = 135°

The total of A and B must be 270° because 360° - 90° = 270° (remember that a full circle is 360° and a right angle is 90°)
And since we know that A and B are equal, A must be half of 270°

A = 270 ÷ 2

A = 135

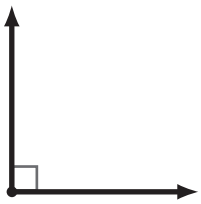
math Antics
Exercises

Name:

Date:

Angles and Degrees

1 What is the size of this angle in degrees?

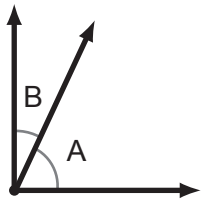


90°

2 What is the size of this angle in degrees?

180°

3 Find the unknown angle.

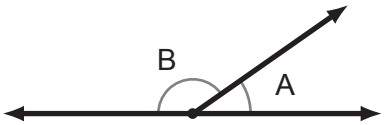


∠A and ∠B are complementary angles.
If ∠A is 65 degrees, how big is ∠B ?

$$\begin{array}{r} {\scriptstyle 8}\,{\scriptstyle 1} \\ 9\,\cancel{0} \\ -\ 6\,5 \\ \hline 2\,5 \end{array}$$

m∠B = 25°

4 Find the unknown angle.

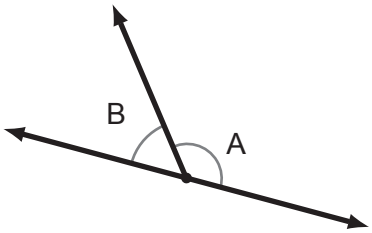


∠A and ∠B are supplementary angles.
If ∠A is 35 degrees, how big is ∠B ?

$$\begin{array}{r} {\scriptstyle 7}\,{\scriptstyle 1} \\ 1\,8\,\cancel{0} \\ -\ 3\,5 \\ \hline 1\,4\,5 \end{array}$$

m∠B = 145°

5 Find the unknown angle.

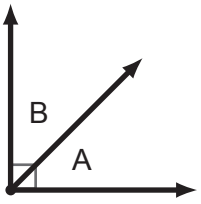


If ∠A is 128 degrees, how big is ∠B ?

$$\begin{array}{r} {\scriptstyle 7}\,{\scriptstyle 1} \\ 1\,8\,\cancel{0} \\ -\ 1\,2\,8 \\ \hline 5\,2 \end{array}$$

m∠B = 52°

6 Find the unknown angle.



If ∠A is the same size as ∠B ,
how big is ∠A ?

If A and B are equal, then they must each be half of the total. Since they form a Right Angle, the total must be 90 degrees, so Angle A is half of 90. which is 45 degrees!

m∠B = m∠A = 45°

See Video for step-by-step solutions to each problem.

math Antics Worksheets

Name:

Date:

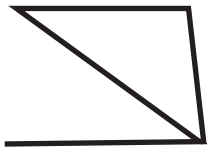
Identifying Polygons

G-PG 1

Instructions: Tell if each of these objects is a polygon. Mark 'yes' if the object is a polygon. Mark 'no' if it is not.

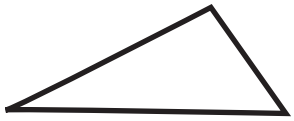
1

- [ ] Yes
- [x] No



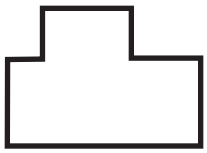
2

- [ ] Yes
- [ ] No



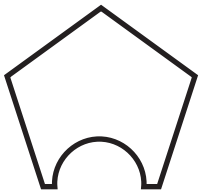
3

- [ ] Yes
- [ ] No



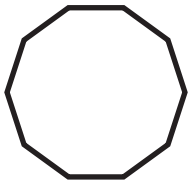
4

- [ ] Yes
- [ ] No



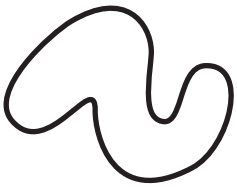
5

- [ ] Yes
- [ ] No



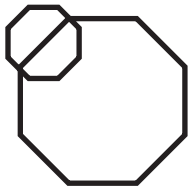
6

- [ ] Yes
- [ ] No



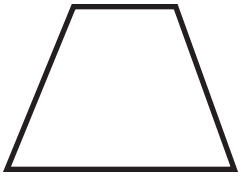
7

- [ ] Yes
- [ ] No



8

- [ ] Yes
- [ ] No

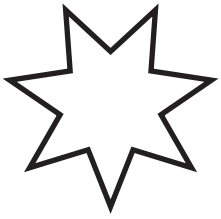


9

- [ ] Yes
- [ ] No

10

- [ ] Yes
- [ ] No



math Antics Worksheets

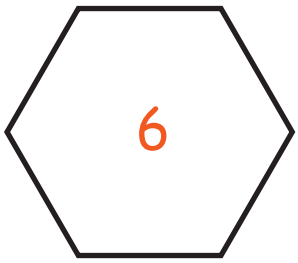
Name:

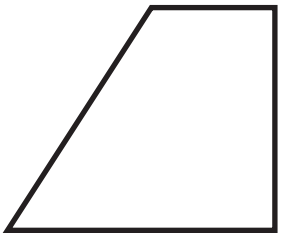
Date:

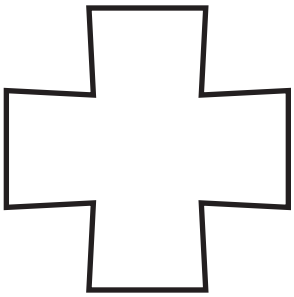
Polygon Sides

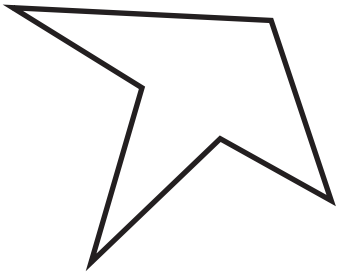
G-PG 2

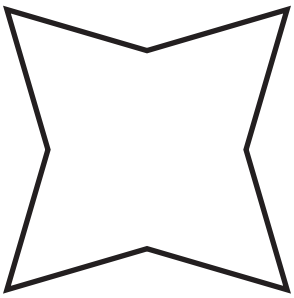
Instructions: Count how many sides each of these polygons has and write the total inside the polygon.

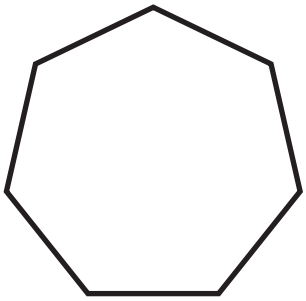
1 

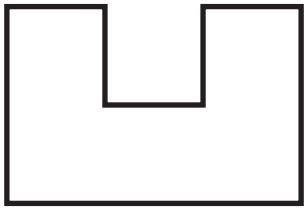
2 

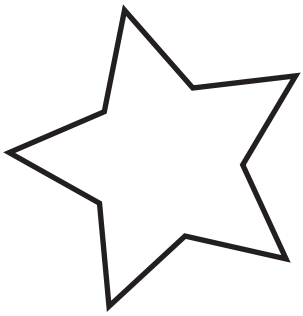
3 

4 

5 

6 

7 

8 

math Antics Worksheets

Name:

Date:

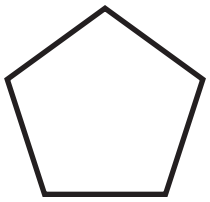
Polygon Names

G-PG 3

Instructions: For each polygon, mark the box that matches its name.

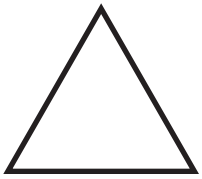
1

- [ ] Hexagon
- [ ] Triangle
- [x] Pentagon
- [ ] Quadrilateral



2

- [ ] Pentagon
- [ ] Triangle
- [ ] Octagon
- [ ] Hexagon

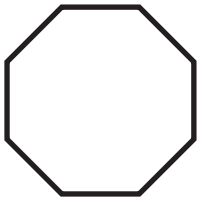


3

- [ ] Quadrilateral
- [ ] Triangle
- [ ] Pentagon
- [ ] Octagon

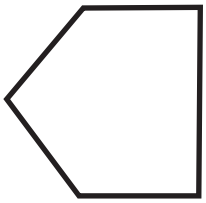
4

- [ ] Hexagon
- [ ] Octagon
- [ ] Triangle
- [ ] Quadrilateral



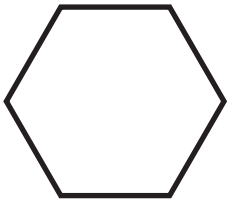
5

- [ ] Triangle
- [ ] Hexagon
- [ ] Quadrilateral
- [ ] Pentagon



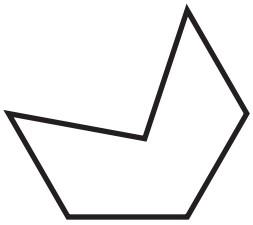
6

- [ ] Hexagon
- [ ] Pentagon
- [ ] Octagon
- [ ] Triangle



7

- [ ] Quadrilateral
- [ ] Triangle
- [ ] Hexagon
- [ ] Pentagon



8

- [ ] Pentagon
- [ ] Quadrilateral
- [ ] Triangle
- [ ] Octagon

math Antics
Exercises

Name: _____

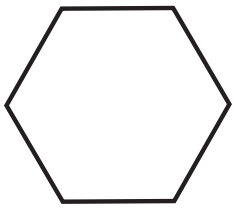
Date: _____

Polygons

In this exercise set, you get to play a game of:

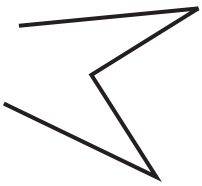
Look at each object and mark the correct box.

1



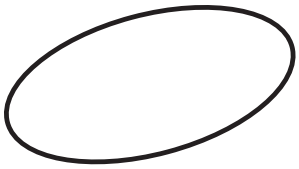
☐ Polygon ☐ NOT a Polygon

2



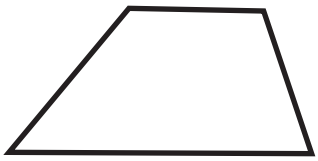
☐ Polygon ☐ NOT a Polygon

3



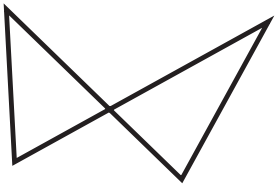
☐ Polygon ☐ NOT a Polygon

4



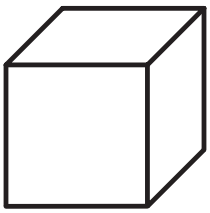
☐ Polygon ☐ NOT a Polygon

5



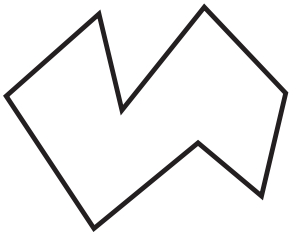
☐ Polygon ☐ NOT a Polygon

6



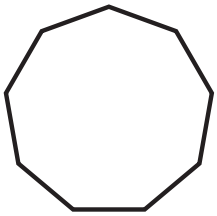
☐ Polygon ☐ NOT a Polygon

7



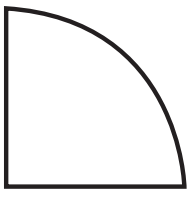
☐ Polygon ☐ NOT a Polygon

8



☐ Polygon ☐ NOT a Polygon

9



☐ Polygon ☐ NOT a Polygon

math Antics Worksheets

Name:

Date:

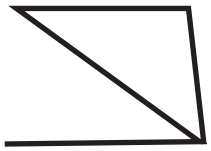
Identifying Polygons

G-PG 1

Instructions: Tell if each of these objects is a polygon. Mark 'yes' if the object is a polygon. Mark 'no' if it is not.

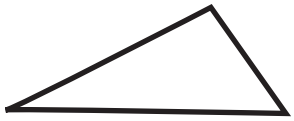
1

- [ ] Yes
- [x] No



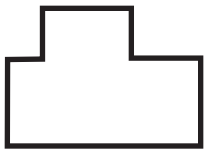
2

- [x] Yes
- [ ] No



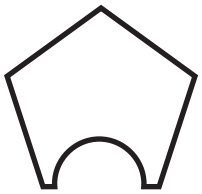
3

- [x] Yes
- [ ] No



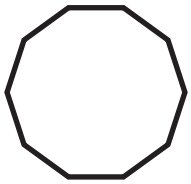
4

- [ ] Yes
- [x] No



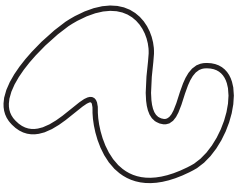
5

- [x] Yes
- [ ] No



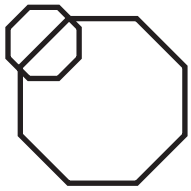
6

- [ ] Yes
- [x] No



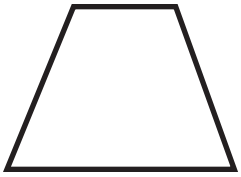
7

- [ ] Yes
- [x] No



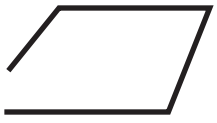
8

- [x] Yes
- [ ] No



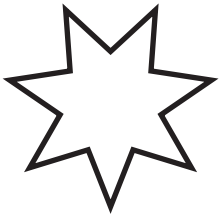
9

- [ ] Yes
- [x] No



10

- [x] Yes
- [ ] No



math Antics Worksheets

Name:

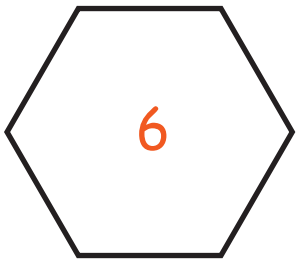
Date:

Polygon Sides

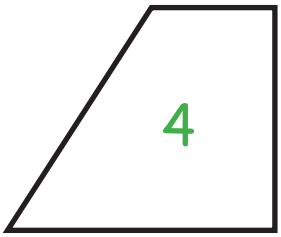
G-PG 2

Instructions: Count how many sides each of these polygons has and write the total inside the polygon.

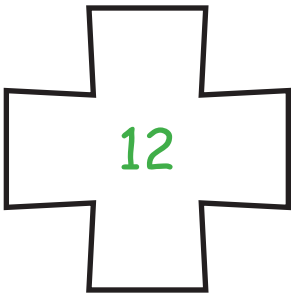
1



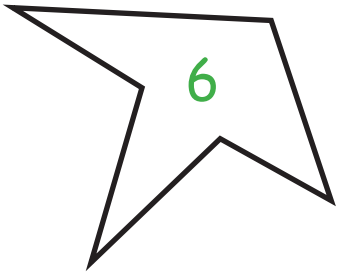
2



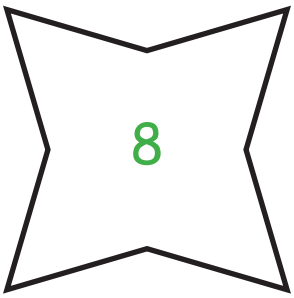
3



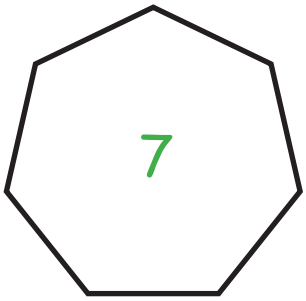
4



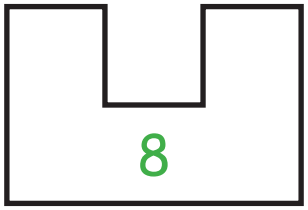
5



6



7



8

math Antics Worksheets

Name:

Date:

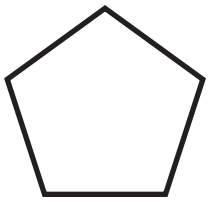
Polygon Names

G-PG 3

Instructions: For each polygon, mark the box that matches its name.

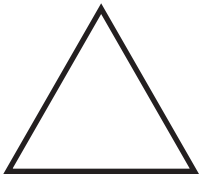
1

- [ ] Hexagon
- [ ] Triangle
- [x] Pentagon
- [ ] Quadrilateral



2

- [ ] Pentagon
- [x] Triangle
- [ ] Octagon
- [ ] Hexagon

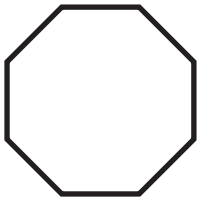


3

- [x] Quadrilateral
- [ ] Triangle
- [ ] Pentagon
- [ ] Octagon

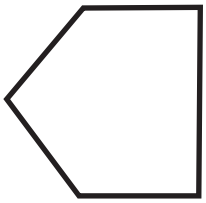
4

- [ ] Hexagon
- [x] Octagon
- [ ] Triangle
- [ ] Quadrilateral



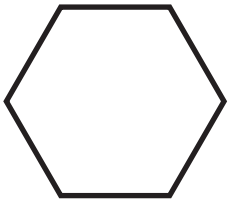
5

- [ ] Triangle
- [ ] Hexagon
- [ ] Quadrilateral
- [x] Pentagon



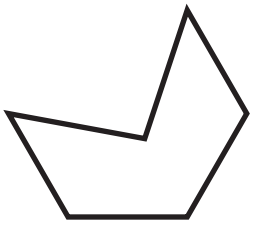
6

- [x] Hexagon
- [ ] Pentagon
- [ ] Octagon
- [ ] Triangle



7

- [ ] Quadrilateral
- [ ] Triangle
- [x] Hexagon
- [ ] Pentagon



8

- [ ] Pentagon
- [x] Quadrilateral
- [ ] Triangle
- [ ] Octagon

math Antics
Exercises

Name:

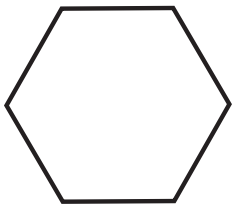
Date:

Polygons

In this exercise set, you get to play a game of:

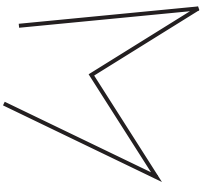
Look at each object and mark the correct box.

1



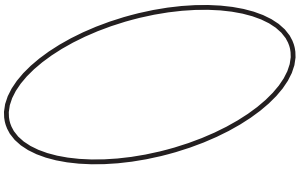
☒ Polygon ☐ NOT a Polygon

2



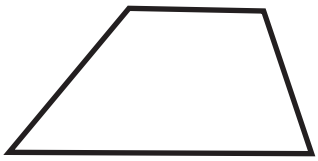
☐ Polygon ☒ NOT a Polygon

3



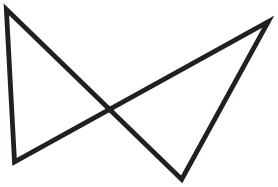
☐ Polygon ☒ NOT a Polygon

4



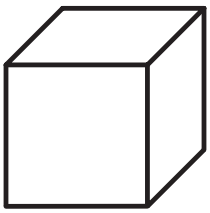
☒ Polygon ☐ NOT a Polygon

5



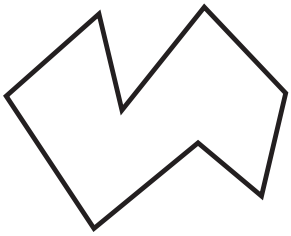
☐ Polygon ☒ NOT a Polygon

6



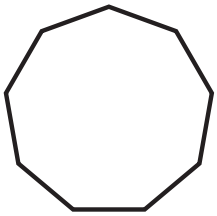
☐ Polygon ☒ NOT a Polygon

7



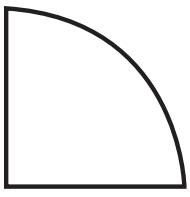
☒ Polygon ☐ NOT a Polygon

8



☒ Polygon ☐ NOT a Polygon

9



☐ Polygon ☒ NOT a Polygon

See Video for step-by-step solutions to each problem.

math Antics Worksheets

Name:

Date:

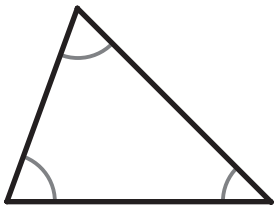
Classifying Triangles (by Angles)

G-TRI 1

Instructions: For each triangle, mark the box that matches its type when classifying by angles.

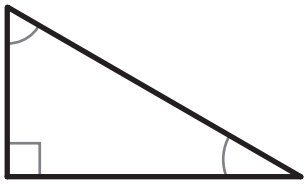
1

- [x] Acute
- [ ] Right
- [ ] Obtuse



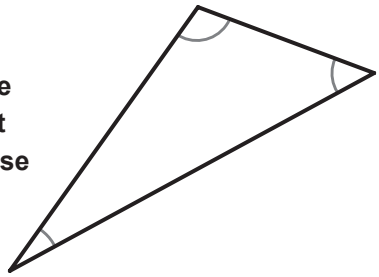
2

- [ ] Acute
- [ ] Right
- [ ] Obtuse



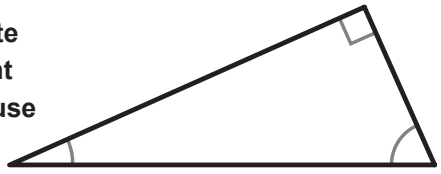
3

- [ ] Acute
- [ ] Right
- [ ] Obtuse



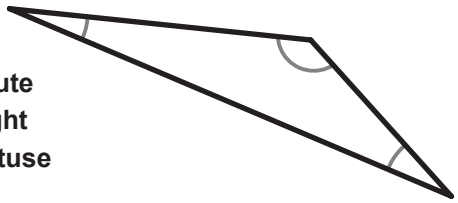
4

- [ ] Acute
- [ ] Right
- [ ] Obtuse



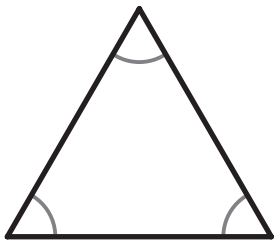
5

- [ ] Acute
- [ ] Right
- [ ] Obtuse



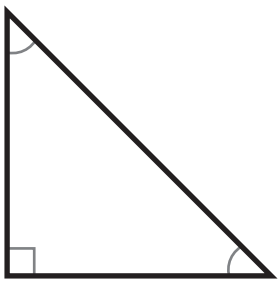
6

- [ ] Acute
- [ ] Right
- [ ] Obtuse



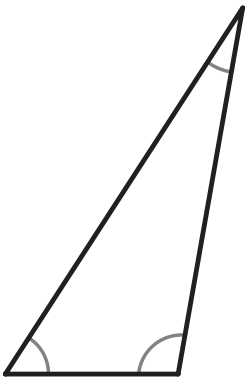
7

- [ ] Acute
- [ ] Right
- [ ] Obtuse



8

- [ ] Acute
- [ ] Right
- [ ] Obtuse



math Antics Worksheets

Name:

Date:

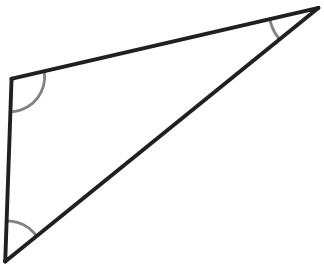
Classifying Triangles (by Sides)

G-TRI 2

Instructions: For each triangle, mark the box that matches its type when classifying by sides. The marks on the sides of the triangles show when two sides are "congruent" or the same length.

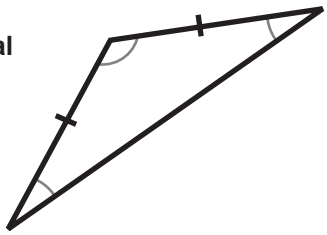
1

- [ ] Equilateral
- [ ] Isosceles
- [x] Scalene



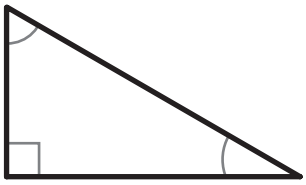
2

- [ ] Equilateral
- [ ] Isosceles
- [ ] Scalene



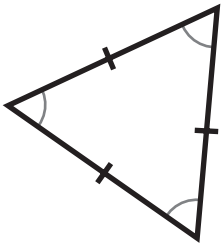
3

- [ ] Equilateral
- [ ] Isosceles
- [ ] Scalene



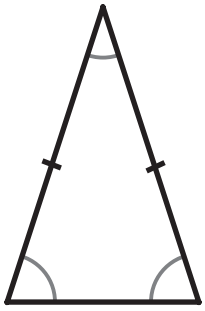
4

- [ ] Equilateral
- [ ] Isosceles
- [ ] Scalene



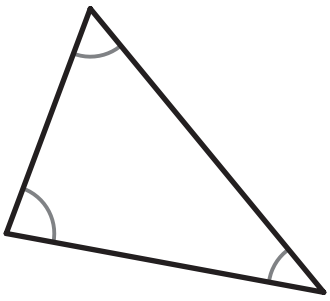
5

- [ ] Equilateral
- [ ] Isosceles
- [ ] Scalene



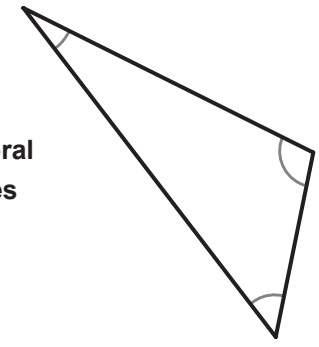
6

- [ ] Equilateral
- [ ] Isosceles
- [ ] Scalene



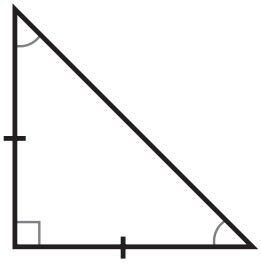
7

- [ ] Equilateral
- [ ] Isosceles
- [ ] Scalene



8

- [ ] Equilateral
- [ ] Isosceles
- [ ] Scalene



math Antics Worksheets

Name: _____

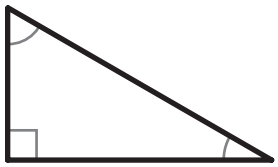
Date: _____

Classifying Triangles (by both Angle and Sides)

G-TRI 3

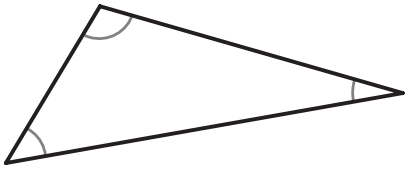
Instructions: For each triangle, mark the box from each catagory that matches its type. The marks on the sides of the triangles show when two sides are "congruent" or the same length.

1



- [ ] Acute
- [x] Right
- [ ] Obtuse
- [ ] Equilateral
- [ ] Isosceles
- [x] Scalene

2

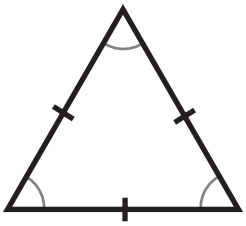


- [ ] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Equilateral
- [ ] Isosceles
- [ ] Scalene

3

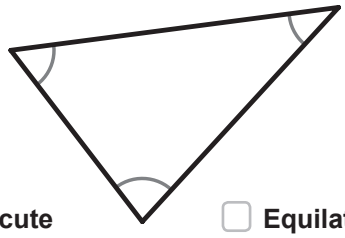
- [ ] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Equilateral
- [ ] Isosceles
- [ ] Scalene

4



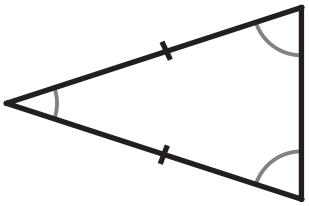
- [ ] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Equilateral
- [ ] Isosceles
- [ ] Scalene

5



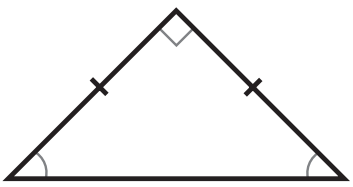
- [ ] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Equilateral
- [ ] Isosceles
- [ ] Scalene

6



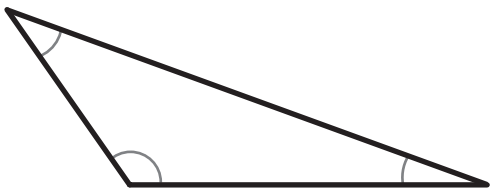
- [ ] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Equilateral
- [ ] Isosceles
- [ ] Scalene

7



- [ ] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Equilateral
- [ ] Isosceles
- [ ] Scalene

8



- [ ] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Equilateral
- [ ] Isosceles
- [ ] Scalene

math Antics Worksheets

Name: _____

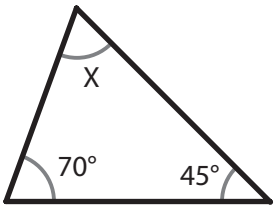
Date: _____

Finding an Unknown Angle

G-TRI 4

Instructions: For each triangle, find the unknown angle (X). Remember that for each triangle, the three interior angles must add up to 180 degrees.

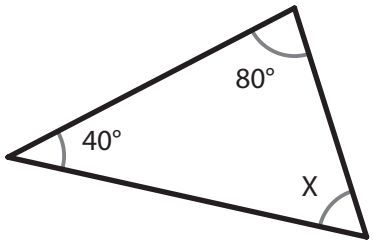
1



m∠X = 65°

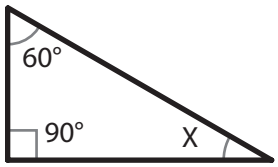
$$\begin{array}{r} 70 \\ +\ 45 \\ \hline 115 \end{array} \qquad \begin{array}{r} {}^{7}\cancel{1}{}^{1}\cancel{8}0 \\ -\ 115 \\ \hline 65 \end{array}$$

2



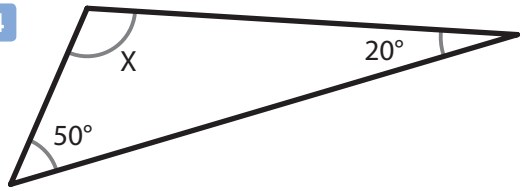
m∠X = _____

3



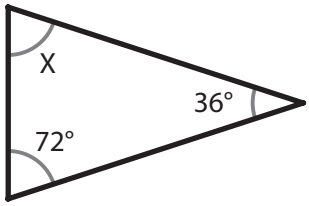
m∠X = _____

4



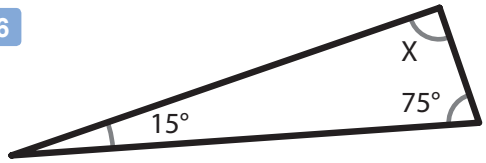
m∠X = _____

5



m∠X = _____

6



m∠X = _____

math Antics Worksheets

Name: _____

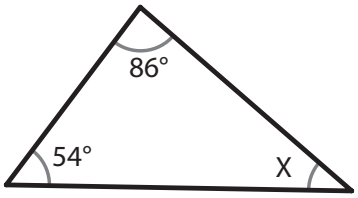
Date: _____

Finding an Unknown Angle - Set 2

G-TRI 5

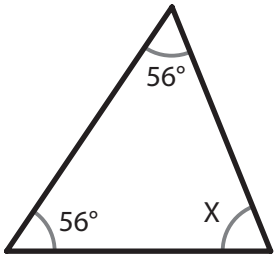
Instructions: For each triangle, find the unknown angle (X). Remember that for each triangle, the three interior angles must add up to 180 degrees.

1



m∠X = _____

2

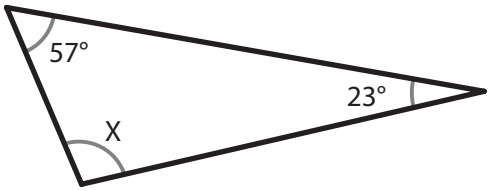


m∠X = _____

3

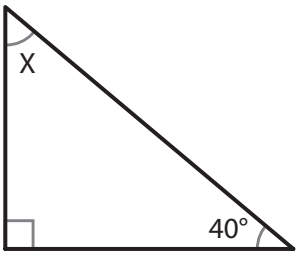
m∠X = _____

4



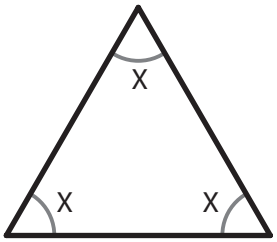
m∠X = _____

5



m∠X = _____

6 **An equilateral triangle always has three equal angles. What is their measure?**



m∠X = _____

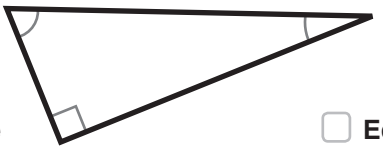
math Antics
Exercises

Name:

Date:

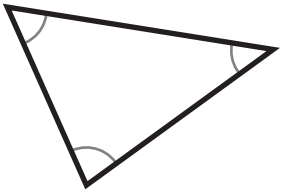
Triangles

1 Classify this triangle. Check any that apply.



- ☐ Acute
- ☐ Right
- ☐ Obtuse
- ☐ Equilateral
- ☐ Isosceles
- ☐ Scalene

2 Classify this triangle. Check any that apply.

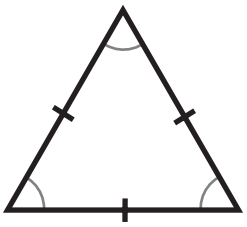


- ☐ Acute
- ☐ Right
- ☐ Obtuse
- ☐ Equilateral
- ☐ Isosceles
- ☐ Scalene

3 Classify this triangle. Check any that apply. (the marked sides are the same length)

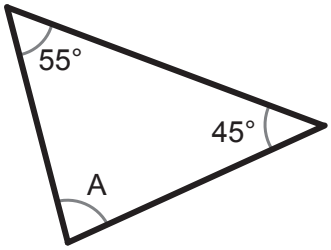
- ☐ Acute
- ☐ Right
- ☐ Obtuse
- ☐ Equilateral
- ☐ Isosceles
- ☐ Scalene

4 Classify this triangle. Check any that apply. (the marked sides are the same length)



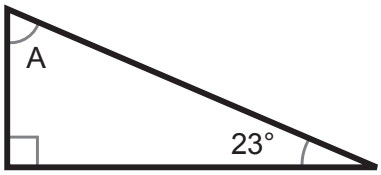
- ☐ Acute
- ☐ Right
- ☐ Obtuse
- ☐ Equilateral
- ☐ Isosceles
- ☐ Scalene

5 Find the unknown angle.

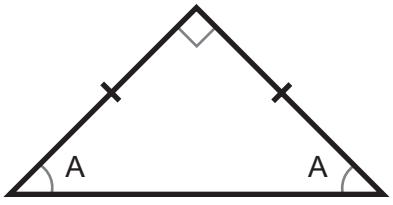


6 Find the unknown angle.

7 Find the unknown angle.



8 Find the unknown angle.



math Antics Worksheets

Name:

Date:

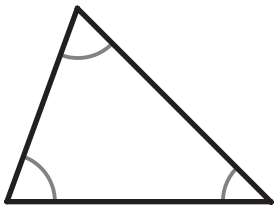
Classifying Triangles (by Angles)

G-TRI 1

Instructions: For each triangle, mark the box that matches its type when classifying by angles.

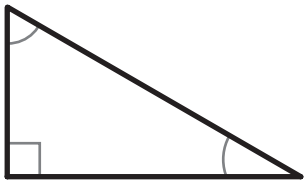
1

- [x] Acute
- [ ] Right
- [ ] Obtuse



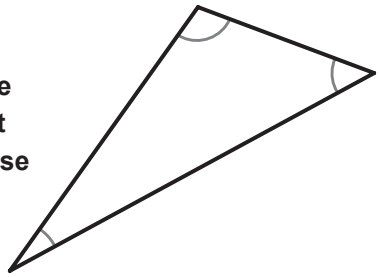
2

- [ ] Acute
- [x] Right
- [ ] Obtuse



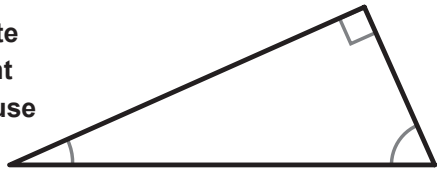
3

- [ ] Acute
- [ ] Right
- [x] Obtuse



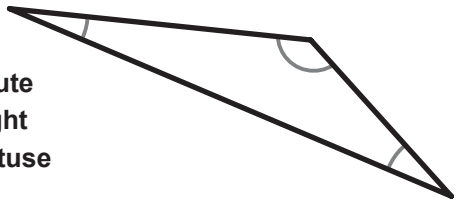
4

- [ ] Acute
- [x] Right
- [ ] Obtuse



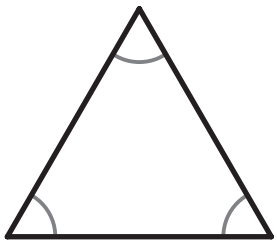
5

- [ ] Acute
- [ ] Right
- [x] Obtuse



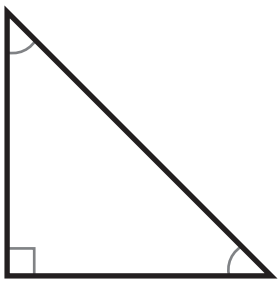
6

- [x] Acute
- [ ] Right
- [ ] Obtuse



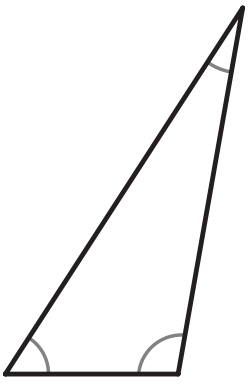
7

- [ ] Acute
- [x] Right
- [ ] Obtuse



8

- [ ] Acute
- [ ] Right
- [x] Obtuse



math Antics Worksheets

Name: _____

Date: _____

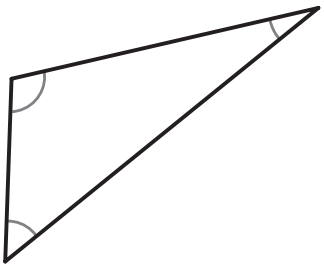
Classifying Triangles (by Sides)

G-TRI 2

Instructions: For each triangle, mark the box that matches its type when classifying by sides. The marks on the sides of the triangles show when two sides are "congruent" or the same length.

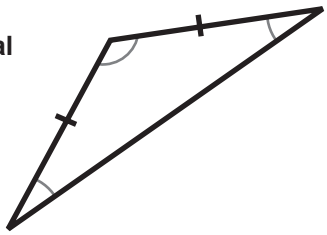
1

- ☐ Equilateral
- ☐ Isosceles
- ☒ Scalene



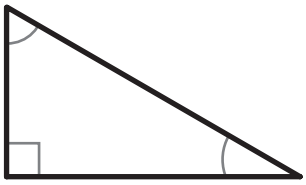
2

- ☐ Equilateral
- ☒ Isosceles
- ☐ Scalene



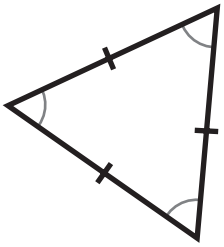
3

- ☐ Equilateral
- ☐ Isosceles
- ☒ Scalene



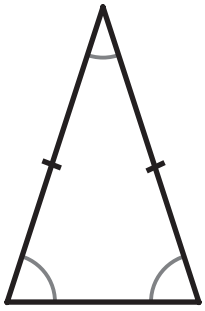
4

- ☒ Equilateral
- ☐ Isosceles
- ☐ Scalene



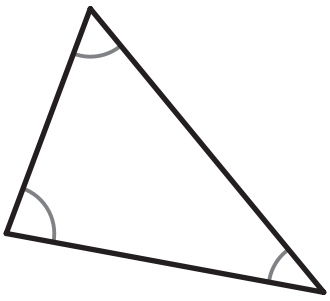
5

- ☐ Equilateral
- ☒ Isosceles
- ☐ Scalene



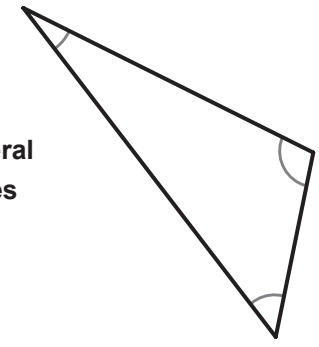
6

- ☐ Equilateral
- ☐ Isosceles
- ☒ Scalene



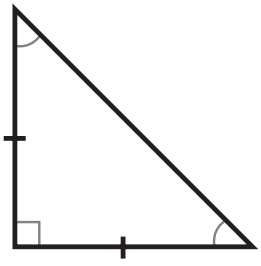
7

- ☐ Equilateral
- ☐ Isosceles
- ☒ Scalene



8

- ☐ Equilateral
- ☒ Isosceles
- ☐ Scalene



math Antics Worksheets

Name:

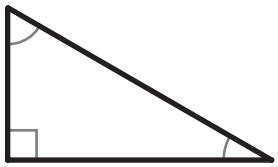
Date:

Classifying Triangles (by both Angle and Sides)

G-TRI 3

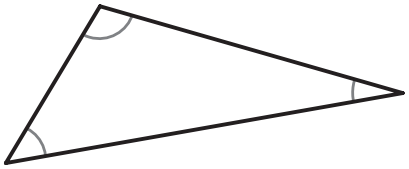
Instructions: For each triangle, mark the box from each catagory that matches its type. The marks on the sides of the triangles show when two sides are "congruent" or the same length.

1



- [ ] Acute
- [x] Right
- [ ] Obtuse
- [ ] Equilateral
- [ ] Isosceles
- [x] Scalene

2

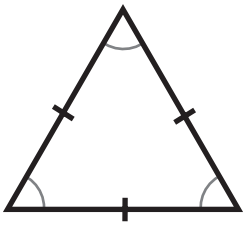


- [ ] Acute
- [ ] Right
- [x] Obtuse
- [ ] Equilateral
- [ ] Isosceles
- [x] Scalene

3

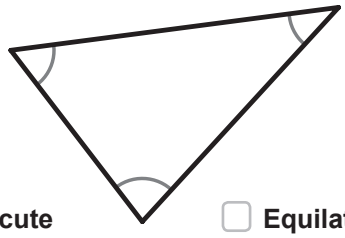
- [ ] Acute
- [ ] Right
- [x] Obtuse
- [ ] Equilateral
- [x] Isosceles
- [ ] Scalene

4



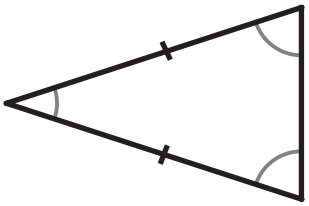
- [x] Acute
- [ ] Right
- [ ] Obtuse
- [x] Equilateral
- [ ] Isosceles
- [ ] Scalene

5



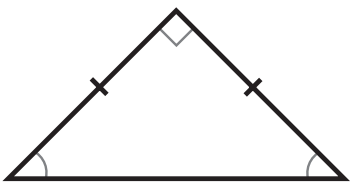
- [x] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Equilateral
- [ ] Isosceles
- [x] Scalene

6



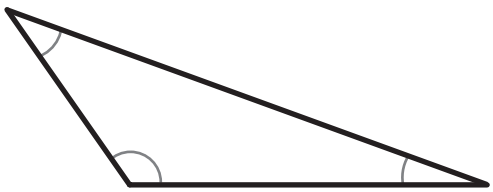
- [x] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Equilateral
- [x] Isosceles
- [ ] Scalene

7



- [ ] Acute
- [x] Right
- [ ] Obtuse
- [ ] Equilateral
- [x] Isosceles
- [ ] Scalene

8



- [ ] Acute
- [ ] Right
- [x] Obtuse
- [ ] Equilateral
- [ ] Isosceles
- [x] Scalene

math Antics Worksheets

Name: _____

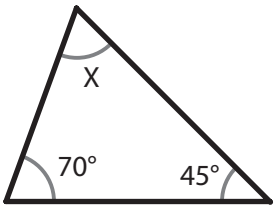
Date: _____

Finding an Unknown Angle

G-TRI 4

Instructions: For each triangle, find the unknown angle (X). Remember that for each triangle, the three interior angles must add up to 180 degrees.

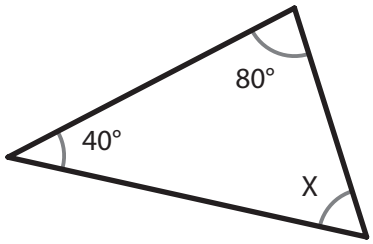
1



m∠X = 65°

$$\begin{array}{r} 70 \\ +\ 45 \\ \hline 115 \end{array} \qquad \begin{array}{r} {}^{7}\cancel{1}{}^{1}\cancel{8}0 \\ -\ 115 \\ \hline 65 \end{array}$$

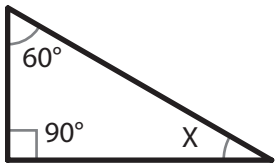
2



m∠X = 60°

$$\begin{array}{r} 80 \\ +\ 40 \\ \hline 120 \end{array} \qquad \begin{array}{r} 180 \\ -\ 120 \\ \hline 60 \end{array}$$

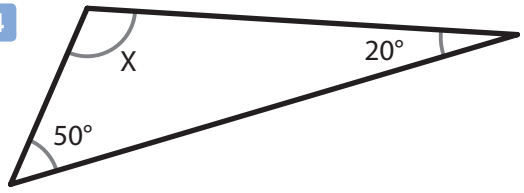
3



m∠X = 30°

$$\begin{array}{r} 90 \\ +\ 60 \\ \hline 150 \end{array} \qquad \begin{array}{r} 180 \\ -\ 150 \\ \hline 30 \end{array}$$

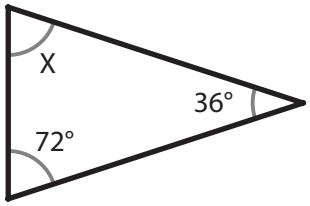
4



m∠X = 110°

$$\begin{array}{r} 50 \\ +\ 20 \\ \hline 70 \end{array} \qquad \begin{array}{r} 180 \\ -\ 70 \\ \hline 110 \end{array}$$

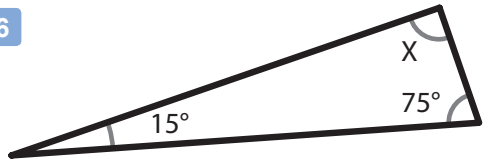
5



m∠X = 72°

$$\begin{array}{r} 72 \\ +\ 36 \\ \hline 108 \end{array} \qquad \begin{array}{r} {}^{7}\cancel{1}{}^{1}\cancel{8}0 \\ -\ 108 \\ \hline 72 \end{array}$$

6



m∠X = 90°

$$\begin{array}{r} {}^{1}75 \\ +\ 15 \\ \hline 90 \end{array} \qquad \begin{array}{r} 180 \\ -\ 90 \\ \hline 90 \end{array}$$

math Antics Worksheets

Name: _____

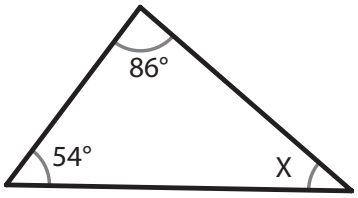
Date: _____

Finding an Unknown Angle - Set 2

G-TRI 5

Instructions: For each triangle, find the unknown angle (X). Remember that for each triangle, the three interior angles must add up to 180 degrees.

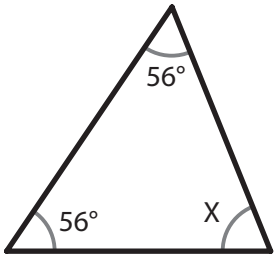
1



m∠X = 40°

$$\begin{array}{r} {\scriptstyle 1} \\ 86 \\ +\ 54 \\ \hline 140 \end{array} \qquad \begin{array}{r} 180 \\ -\ 140 \\ \hline 40 \end{array}$$

2



m∠X = 68°

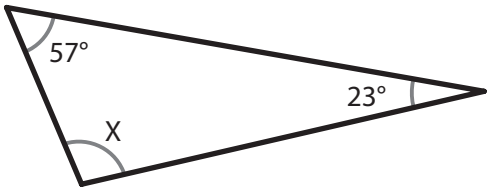
$$\begin{array}{r} {\scriptstyle 1} \\ 56 \\ +\ 56 \\ \hline 112 \end{array} \qquad \begin{array}{r} {\scriptstyle 7\ 1\ 10} \\ 1\cancel{8}\cancel{1}0 \\ -\ 112 \\ \hline 68 \end{array}$$

3

m∠X = 17°

$$\begin{array}{r} {\scriptstyle 1} \\ 138 \\ +\ 25 \\ \hline 163 \end{array} \qquad \begin{array}{r} {\scriptstyle 7\ 1\ 10} \\ 1\cancel{8}\cancel{1}0 \\ -\ 163 \\ \hline 17 \end{array}$$

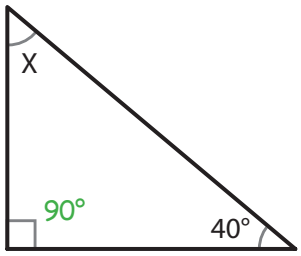
4



m∠X = 100°

$$\begin{array}{r} {\scriptstyle 1} \\ 57 \\ +\ 23 \\ \hline 80 \end{array} \qquad \begin{array}{r} 180 \\ -\ 80 \\ \hline 100 \end{array}$$

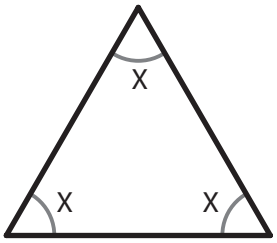
5



m∠X = 50°

$$\begin{array}{r} 90 \\ +\ 40 \\ \hline 130 \end{array} \qquad \begin{array}{r} 180 \\ -\ 130 \\ \hline 50 \end{array}$$

6 **An equilateral triangle always has three equal angles. What is their measure?**



m∠X = 60°

To get the answer, divide the total (180°) by 3

$$\begin{array}{r} 60° \\ 3\overline{)180} \\ -18 \\ \hline 00 \end{array}$$

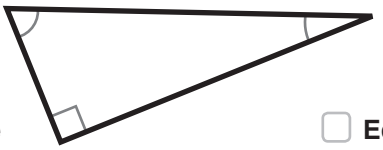
math Antics
Exercises

Name:

Date:

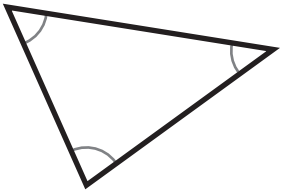
Triangles

1 Classify this triangle. Check any that apply.



- [ ] Acute
- [x] Right
- [ ] Obtuse
- [ ] Equilateral
- [ ] Isosceles
- [x] Scalene

2 Classify this triangle. Check any that apply.

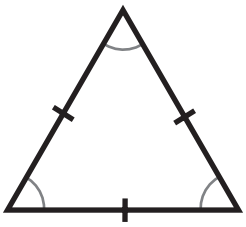


- [x] Acute
- [ ] Right
- [ ] Obtuse
- [ ] Equilateral
- [ ] Isosceles
- [x] Scalene

3 Classify this triangle. Check any that apply. (the marked sides are the same length)

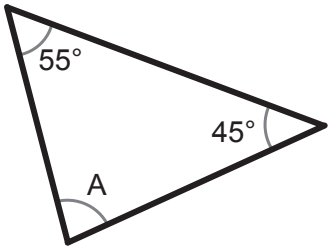
- [ ] Acute
- [ ] Right
- [x] Obtuse
- [ ] Equilateral
- [x] Isosceles
- [ ] Scalene

4 Classify this triangle. Check any that apply. (the marked sides are the same length)



- [x] Acute
- [ ] Right
- [ ] Obtuse
- [x] Equilateral
- [ ] Isosceles
- [ ] Scalene

5 Find the unknown angle.



$$\begin{array}{r} {\scriptstyle 1}\\ 55\\ +\ 45\\ \hline 100 \end{array} \qquad \begin{array}{r} 180\\ -\ 100\\ \hline 80 \end{array}$$

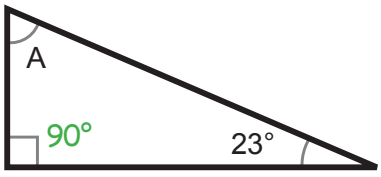
$m\angle A = 80°$

6 Find the unknown angle.

$$\begin{array}{r} {\scriptstyle 1}\\ 125\\ +\ 35\\ \hline 160 \end{array} \qquad \begin{array}{r} 180\\ -\ 160\\ \hline 20 \end{array}$$

$m\angle A = 20°$

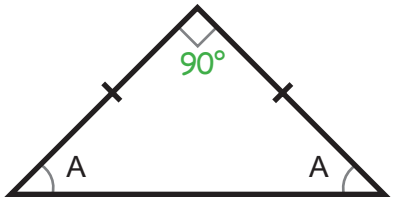
7 Find the unknown angle.



$$\begin{array}{r} 90\\ +\ 23\\ \hline 113 \end{array} \qquad \begin{array}{r} {\scriptstyle 7}\ {\scriptstyle 1}\\ 1\not{8}\not{0}\\ -\ 113\\ \hline 67 \end{array}$$

$m\angle A = 67°$

8 Find the unknown angle.



$$\begin{array}{r} 180\\ -\ 90\\ \hline 90 \end{array} \qquad 90 \div 2 = 45$$

$m\angle A = 45°$

See Video for step-by-step solutions to each problem.

math Antics Worksheets

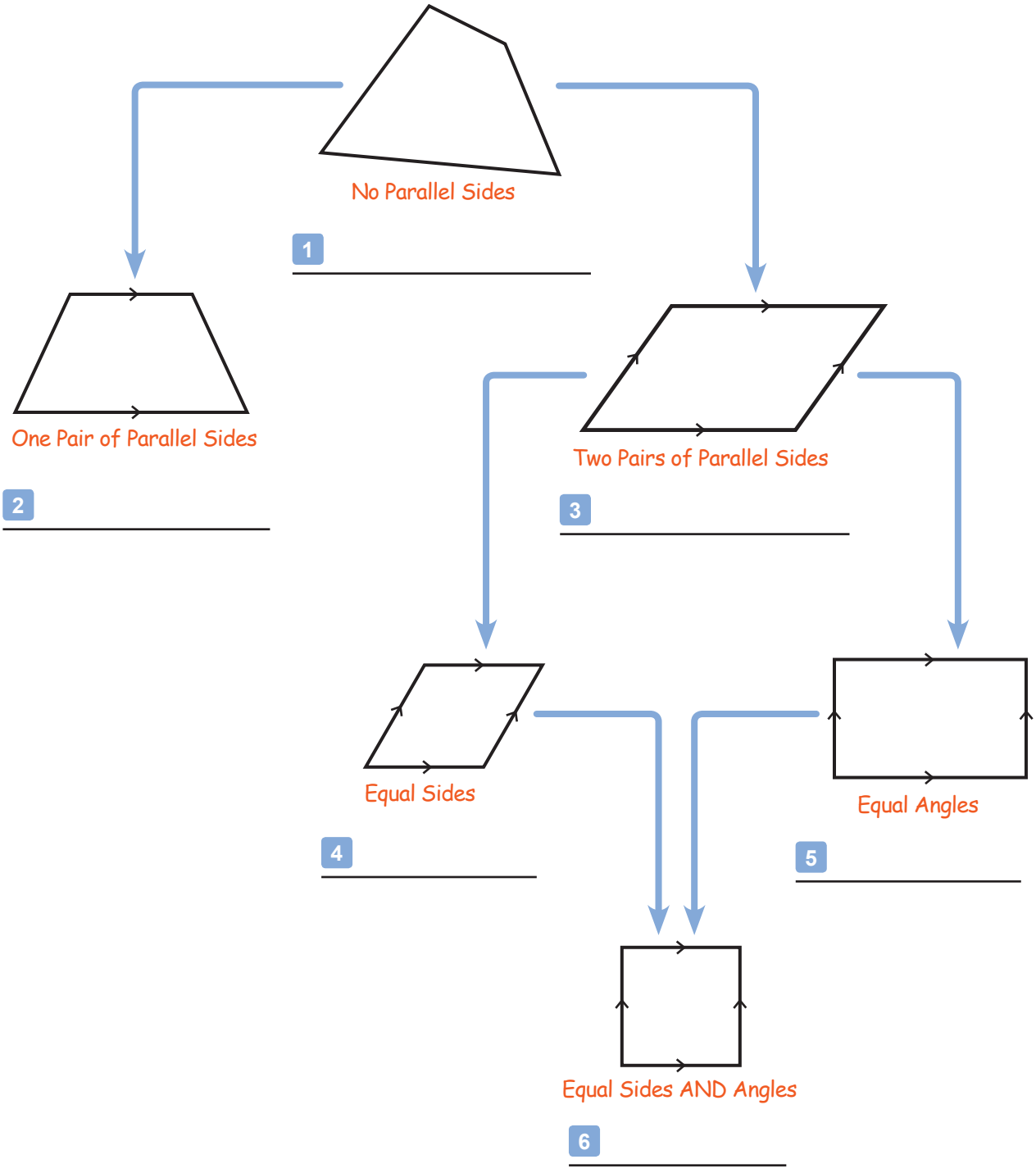
Name:

Date:

Quadrilaterals Chart

G-QUAD 1

Instructions: Complete this quadrilaterals chart by filling in the blanks next to each number. The small arrow symbols on the edges of the quadrilaterals show you pairs of parallel sides.



math Antics Worksheets

Name: _____

Date: _____

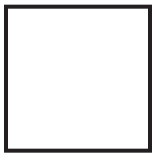
Classifying Quadrilaterals

G-QUAD 2

Instructions: For these quadrilateral, check each box that applies. There may be multiple right answers because more than one term may apply to each quadrilateral. For example, a square is also technically a parallelogram.

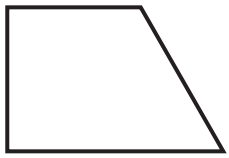
1

- [x] Square
- [x] Quadrilateral
- [ ] Trapezoid
- [x] Parallelogram



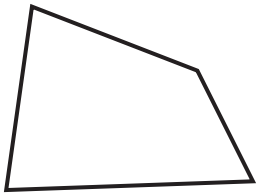
2

- [ ] Triangle
- [ ] Trapezoid
- [ ] Rhombus
- [ ] Quadrilateral



3

- [ ] Parallelogram
- [ ] Trapezoid
- [ ] Rectangle
- [ ] Quadrilateral

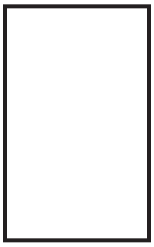


4

- [ ] Rectangle
- [ ] Quadrilateral
- [ ] Rhombus
- [ ] Parallelogram

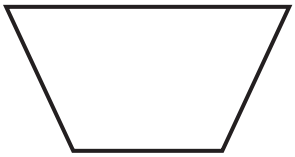
5

- [ ] Parallelogram
- [ ] Rhombus
- [ ] Square
- [ ] Rectangle



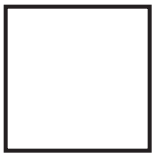
6

- [ ] Trapezoid
- [ ] Quadrilateral
- [ ] Rhombus
- [ ] Parallelogram



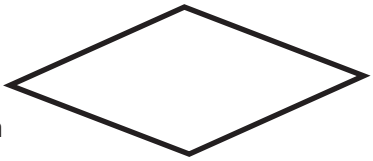
7

- [ ] Square
- [ ] Rhombus
- [ ] Rectangle
- [ ] Parallelogram



8

- [ ] Trapezoid
- [ ] Rhombus
- [ ] Parallelogram
- [ ] Square



math Antics Worksheets

Name: _____

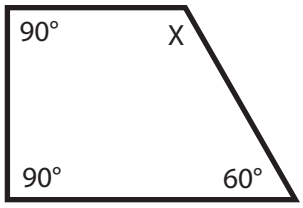
Date: _____

Finding an Unknown Angle

G-QUAD 3

Instructions: For each quadrilateral, find the unknown angle (X). Remember that the four interior angles must add up to a total of 360 degrees.

1

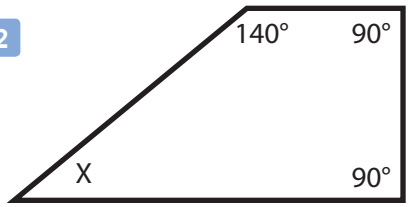


m∠X = 120°

90
90
+ 60
240

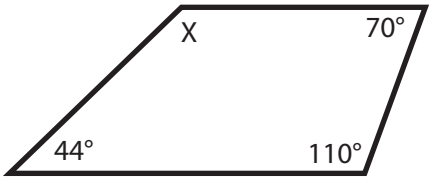
360
- 240
120

2



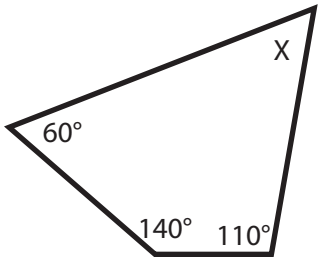
m∠X = _____

3



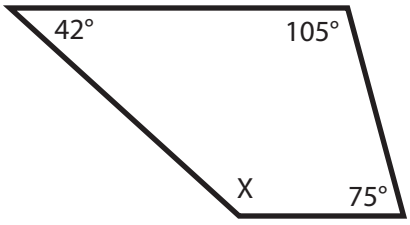
m∠X = _____

4



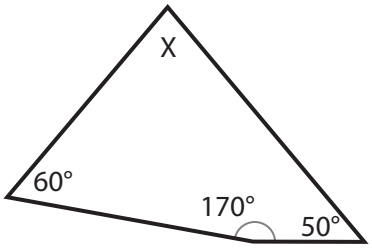
m∠X = _____

5



m∠X = _____

6



m∠X = _____

math Antics Worksheets

Name: _____

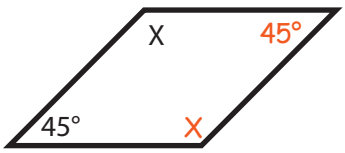
Date: _____

Finding an Unknown Angle in a Parallelogram

G-QUAD 4

Instructions: For each parallelogram, find the unknown angle (X). Remember that the opposite angles in a parallelogram are equal, and that all four angles must add to a total of 360 degrees.

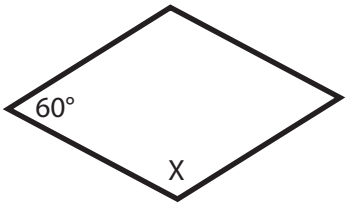
1



m∠X = 135°

$$\begin{array}{r} {\scriptstyle 1}\\ 45\\ +\ 45\\ \hline 90 \end{array} \qquad \begin{array}{r} {\scriptstyle 2\ 1}\\ 3\not{6}0\\ -\ 90\\ \hline 270 \end{array} \qquad \begin{array}{r} 135\\ 2\overline{)270} \end{array}$$

2

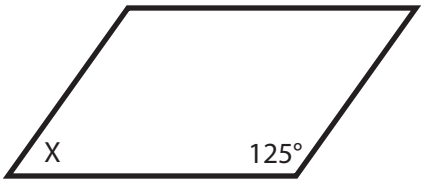


m∠X = _____

3

m∠X = _____

4

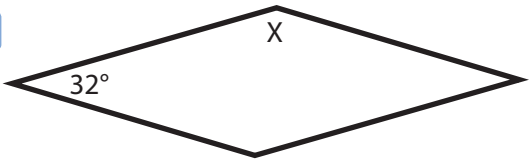


m∠X = _____

5

m∠X = _____

6



m∠X = _____

math Antics
Exercises

Name: _____

Date: _____

Quadrilaterals

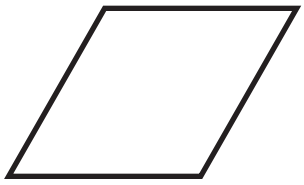
1 What do we call a quadrilateral that has **two** pairs of parallel sides?

_____

2 What do we call a quadrilateral that has only **one** pair of parallel sides?

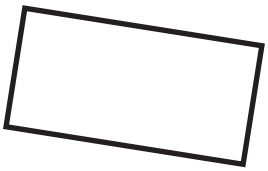
_____

3 This parallelogram has 4 equal sides, but not 4 equal angles. What is its name?



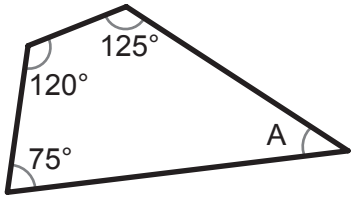
_____

4 This parallelogram has 4 equal angles, but not 4 equal sides. What is its name?

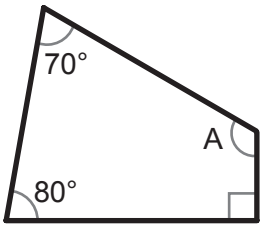


_____

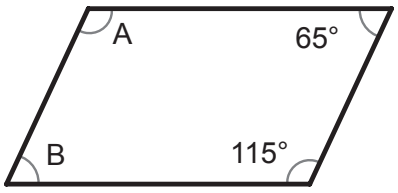
5 Find the unknown angle A.



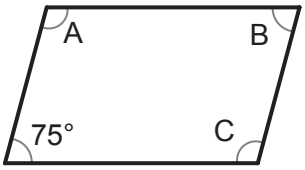
6 Find the unknown angle A.



7 Find the unknown angles A and B, in this parallelogram.



8 Find angle A in this parallelogram.



math Antics Worksheets

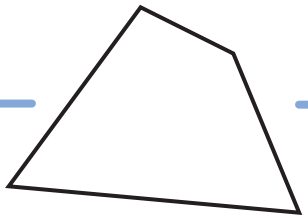
Name: _____

Date: _____

Quadrilaterals Chart

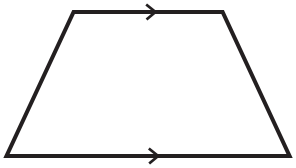
G-QUAD 1

Instructions: Complete this quadrilaterals chart by filling in the blanks next to each number. The small arrow symbols on the edges of the quadrilaterals show you pairs of parallel sides.



No Parallel Sides

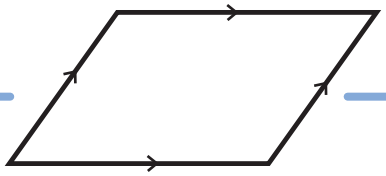
1 Quadrilateral



One Pair of Parallel Sides

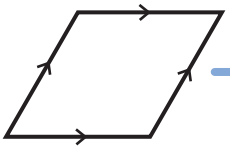
2 Trapezoid

or Trapezium*



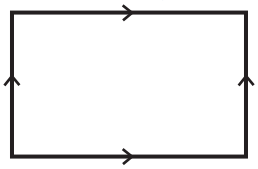
Two Pairs of Parallel Sides

3 Parallelogram



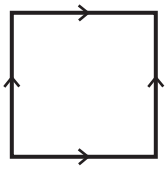
Equal Sides

4 Rhombus



Equal Angles

5 Rectangle



Equal Sides AND Angles

6 Square

* see video for explination

math Antics Worksheets

Name:

Date:

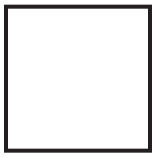
Classifying Quadrilaterals

G-QUAD 2

Instructions: For these quadrilateral, check each box that applies. There may be multiple right answers because more than one term may apply to each quadrilateral. For example, a square is also technically a parallelogram.

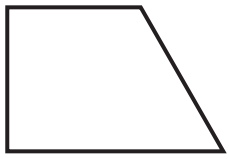
1

- [x] Square
- [x] Quadrilateral
- [ ] Trapezoid
- [x] Parallelogram



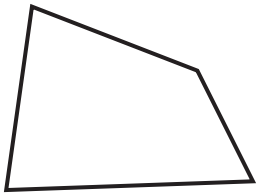
2

- [ ] Triangle
- [x] Trapezoid
- [ ] Rhombus
- [x] Quadrilateral



3

- [ ] Parallelogram
- [ ] Trapezoid
- [ ] Rectangle
- [x] Quadrilateral

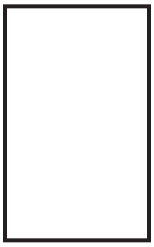


4

- [ ] Rectangle
- [x] Quadrilateral
- [ ] Rhombus
- [x] Parallelogram

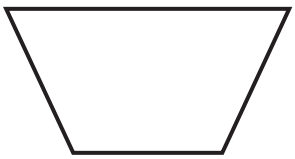
5

- [x] Parallelogram
- [ ] Rhombus
- [ ] Square
- [x] Rectangle



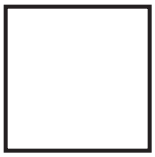
6

- [x] Trapezoid
- [x] Quadrilateral
- [ ] Rhombus
- [ ] Parallelogram



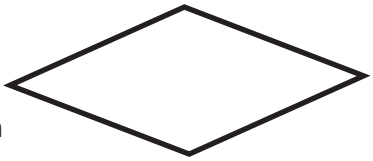
7

- [x] Square
- [x] Rhombus
- [x] Rectangle
- [x] Parallelogram



8

- [ ] Trapezoid
- [x] Rhombus
- [x] Parallelogram
- [ ] Square



math Antics Worksheets

Name: _____

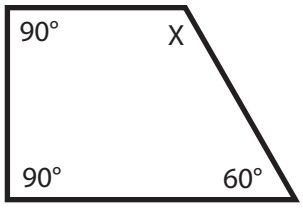
Date: _____

Finding an Unknown Angle

G-QUAD 3

Instructions: For each quadrilateral, find the unknown angle (X). Remember that the four interior angles must add up to a total of 360 degrees.

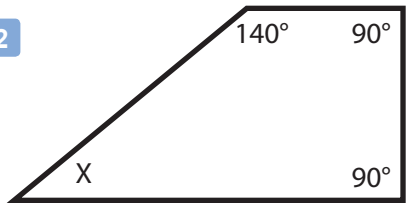
1



m∠X = 120°

$$\begin{array}{r} 90 \\ 90 \\ +\ 60 \\ \hline 240 \end{array} \qquad \begin{array}{r} 360 \\ -\ 240 \\ \hline 120 \end{array}$$

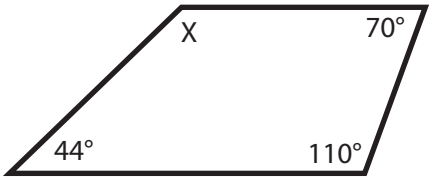
2



m∠X = 40°

$$\begin{array}{r} {\scriptstyle 2} \\ 140 \\ 90 \\ +\ 90 \\ \hline 320 \end{array} \qquad \begin{array}{r} 360 \\ -\ 320 \\ \hline 40 \end{array}$$

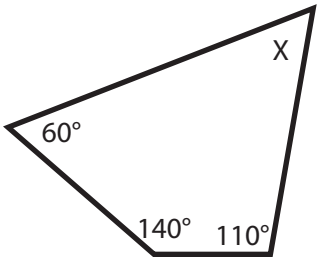
3



m∠X = 136°

$$\begin{array}{r} {\scriptstyle 1} \\ 110 \\ 70 \\ +\ 44 \\ \hline 224 \end{array} \qquad \begin{array}{r} {\scriptstyle 5}\,{\scriptstyle 11}\,{\scriptstyle 0} \\ 3\cancel{6}0 \\ -\ 224 \\ \hline 136 \end{array}$$

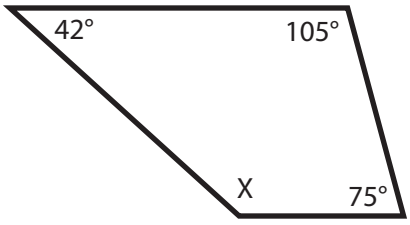
4



m∠X = 50°

$$\begin{array}{r} {\scriptstyle 1} \\ 140 \\ 110 \\ +\ 60 \\ \hline 310 \end{array} \qquad \begin{array}{r} 360 \\ -\ 310 \\ \hline 50 \end{array}$$

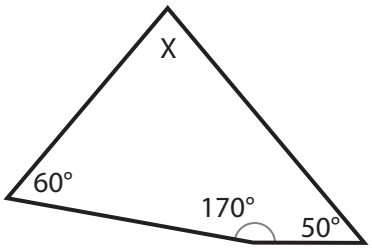
5



m∠X = 138°

$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 105 \\ 75 \\ +\ 42 \\ \hline 222 \end{array} \qquad \begin{array}{r} {\scriptstyle 5}\,{\scriptstyle 11}\,{\scriptstyle 0} \\ 3\cancel{6}0 \\ -\ 222 \\ \hline 138 \end{array}$$

6



m∠X = 80°

$$\begin{array}{r} {\scriptstyle 1} \\ 170 \\ 60 \\ +\ 50 \\ \hline 280 \end{array} \qquad \begin{array}{r} {\scriptstyle 2}\,{\scriptstyle 11}\,{\scriptstyle 0} \\ 3\cancel{6}0 \\ -\ 280 \\ \hline 80 \end{array}$$

math Antics Worksheets

Name: _____

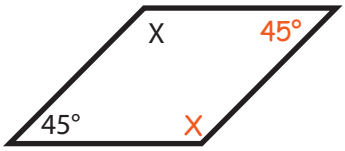
Date: _____

Finding an Unknown Angle in a Parallelogram

G-QUAD 4

Instructions: For each parallelogram, find the unknown angle (X). Remember that the opposite angles in a parallelogram are equal, and that all four angles must add to a total of 360 degrees.

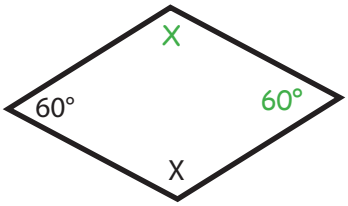
1



m∠X = 135°

$$\begin{array}{r} {\scriptstyle 1}\\ 45\\ +\ 45\\ \hline 90 \end{array} \qquad \begin{array}{r} {\scriptstyle 2}\\ 3\not{6}{\scriptstyle 1}0\\ -\ 90\\ \hline 270 \end{array} \qquad 2\overline{)270} \quad 135$$

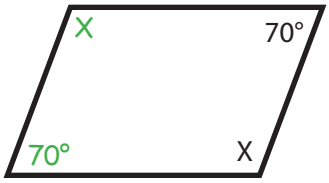
2



m∠X = 120°

$$\begin{array}{r} 60\\ +\ 60\\ \hline 120 \end{array} \qquad \begin{array}{r} 360\\ -\ 120\\ \hline 240 \end{array} \qquad 2\overline{)240} \quad 120$$

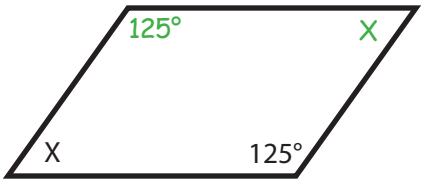
3



m∠X = 110°

$$\begin{array}{r} 70\\ +\ 70\\ \hline 140 \end{array} \qquad \begin{array}{r} 360\\ -\ 140\\ \hline 220 \end{array} \qquad 2\overline{)220} \quad 110$$

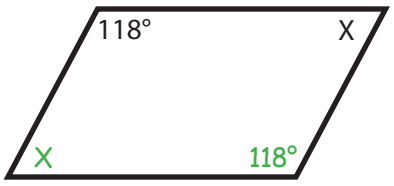
4



m∠X = 55°

$$\begin{array}{r} 125\\ +125\\ \hline 250 \end{array} \qquad \begin{array}{r} 360\\ -250\\ \hline 110 \end{array} \qquad 2\overline{)110} \quad 55$$

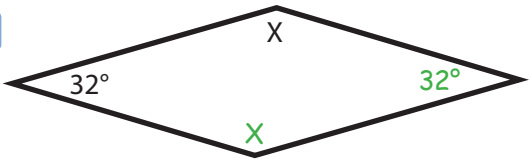
5



m∠X = 62°

$$\begin{array}{r} {\scriptstyle 1}\\ 118\\ +118\\ \hline 236 \end{array} \qquad \begin{array}{r} {\scriptstyle 5}\\ 3\not{6}{\scriptstyle 1}0\\ -236\\ \hline 124 \end{array} \qquad 2\overline{)124} \quad 62$$

6



m∠X = 148°

$$\begin{array}{r} 32\\ +\ 32\\ \hline 64 \end{array} \qquad \begin{array}{r} {\scriptstyle 2}{\scriptstyle 15}\\ 3\not{6}{\scriptstyle 1}0\\ -\ 64\\ \hline 296 \end{array} \qquad 2\overline{)296} \quad 148$$

math Antics
Exercises

Name: _____

Date: _____

Quadrilaterals

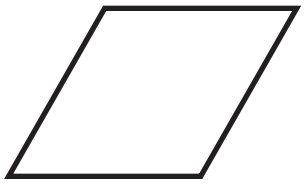
1 What do we call a quadrilateral that has **two** pairs of parallel sides?

a parallelogram

2 What do we call a quadrilateral that has only **one** pair of parallel sides?

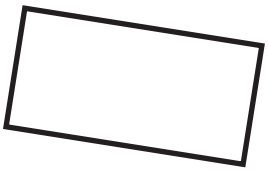
a trapezoid (or trapezium)

3 This parallelogram has 4 equal sides, but not 4 equal angles. What is its name?



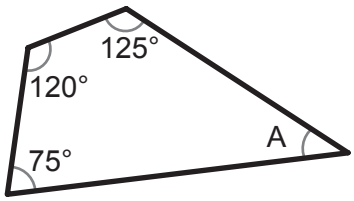
rhombus

4 This parallelogram has 4 equal angles, but not 4 equal sides. What is its name?



rectangle

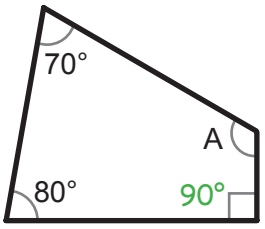
5 Find the unknown angle A.



$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 120 \\ 125 \\ +\ \ 75 \\ \hline 320 \end{array} \qquad \begin{array}{r} 360 \\ -\ 320 \\ \hline 40 \end{array}$$

$m\angle A = 40°$

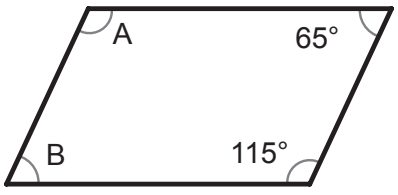
6 Find the unknown angle A.



$$\begin{array}{r} 90 \\ 80 \\ +\ \ 70 \\ \hline 240 \end{array} \qquad \begin{array}{r} 360 \\ -\ 240 \\ \hline 120 \end{array}$$

$m\angle A = 120°$

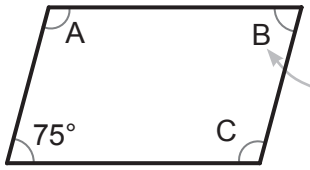
7 Find the unknown angles A and B, in this parallelogram.



The opposite angles in a parallelogram are equal.

$m\angle A = 115°$ $m\angle B = 65°$

8 Find angle A in this parallelogram.



$m\angle B = 75°$

$$\begin{array}{r} {\scriptstyle 1} \\ 75 \\ +\ 75 \\ \hline 150 \end{array} \qquad \begin{array}{r} 360 \\ -\ 150 \\ \hline 210 \end{array} \qquad 210 \div 2 = 105$$

$m\angle A = 105°$

See Video for step-by-step solutions to each problem.

math Antics Worksheets

Name:

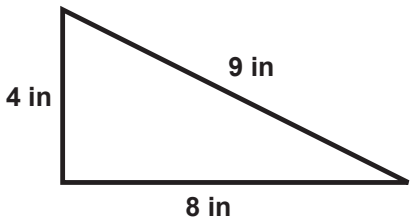
Date:

Finding the Perimeter of Triangles

G-PER 1

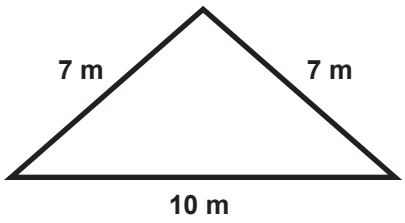
Instructions: Find the perimeter of each triangle by adding up the lengths of it's three sides. Don't forget your units!

1

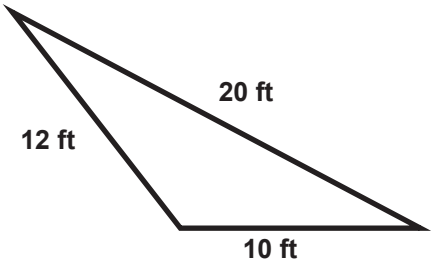


8 + 9 + 4 = 21 in

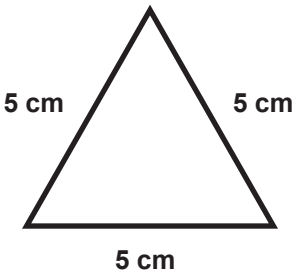
2



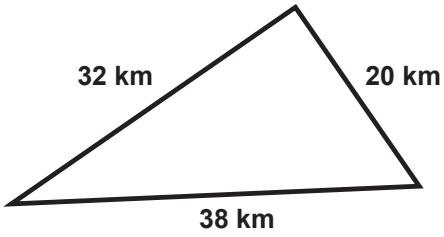
3



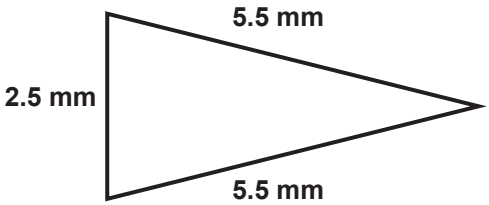
4



5



6



math Antics Worksheets

Name:

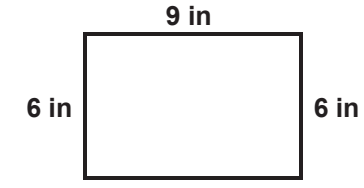
Date:

Finding the Perimeter of Rectangles

G-PER 2

Instructions: Find the perimeter of each rectangle by adding up the lengths of it's four sides. Remember that you can add the sides in any order you want to. Don't forget your units!

1

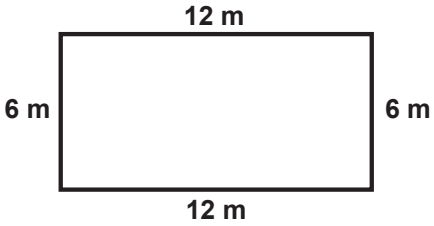


$9 + 9 = 18$

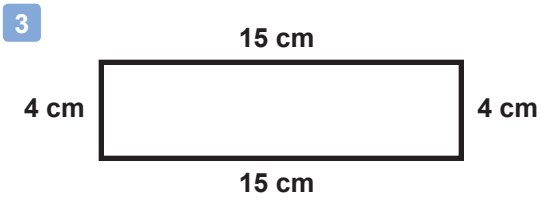
$6 + 6 = 12$

$$\begin{array}{r} {\scriptstyle 1} \\ 18 \\ +\ 12 \\ \hline 30 \text{ in} \end{array}$$

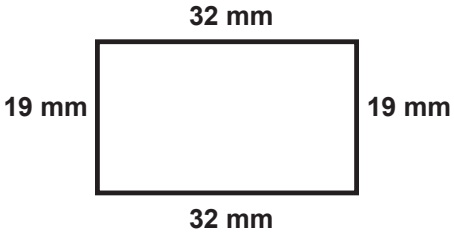
2



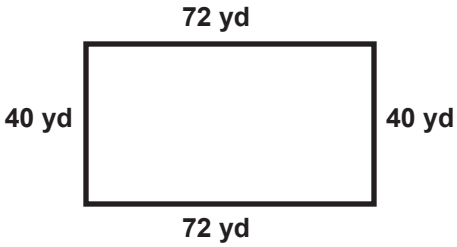
3



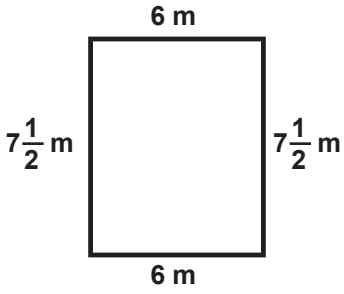
4



5



6



math Antics Worksheets

Name:

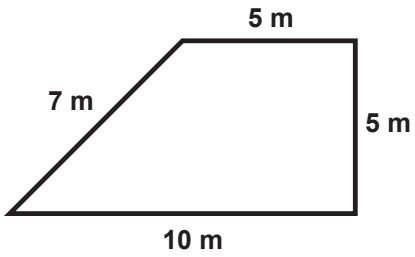
Date:

Finding the Perimeter of Polygons

G-PER 3

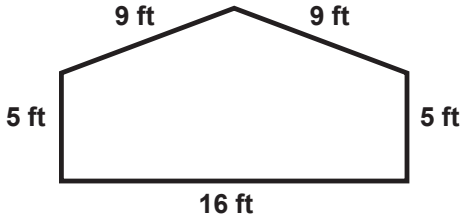
Instructions: Find the perimeter of each polygon by adding up the lengths of all of it's sides. You can add the sides in any order you want to. Don't forget your units!

1

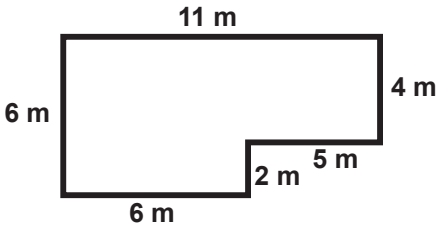


5 + 5 + 10 +7 = 27 m

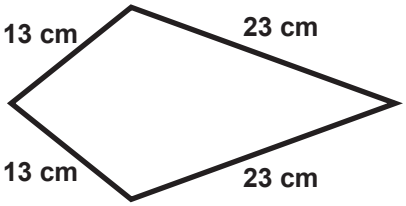
2



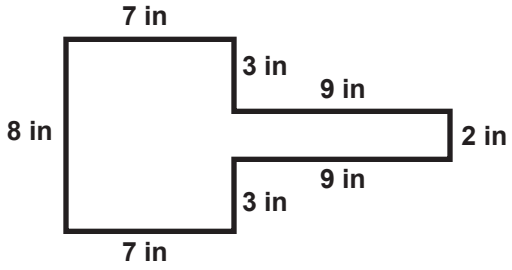
3



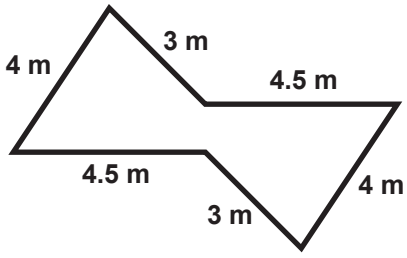
4



5



6



math Antics Worksheets

Name:

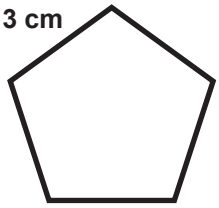
Date:

Finding the Perimeter of Regular Polygons

G-PER 4

Instructions: Find the perimeter of each **regular** polygon by adding up the lengths of all it's sides. Since these are regular polygons, use multiplication as a shortcut. Don't forget your units!

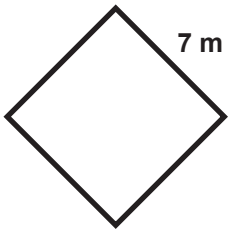
1



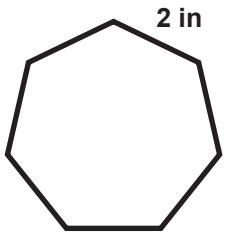
5 equal sides, 3 cm per side

5 × 3 = 15 cm

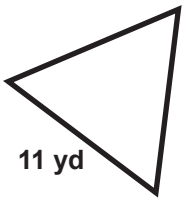
2



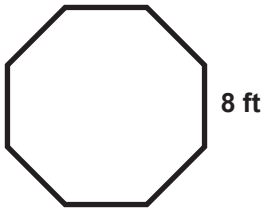
3



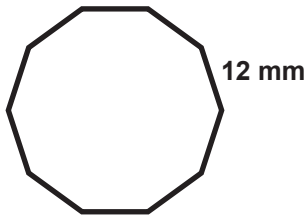
4



5



6



math Antics Worksheets

Name:

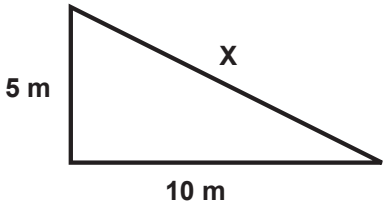
Date:

Using the Perimeter to Find a Missing Side

G-PER 5

Instructions: Use the perimeter of each polygon to figure out the length of the missing side (X). (Hint: Subtract the sum of the sides you *do* know from the total perimeter and see what is left over.)

1



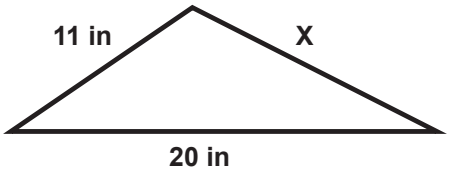
Perimeter = 26 m

X = 26 - (5 + 10)

X = 26 - 15

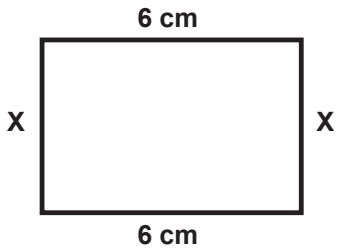
X = 11 m

2



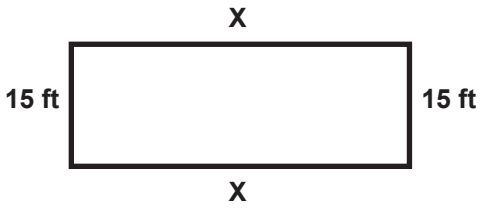
Perimeter = 44 in

3



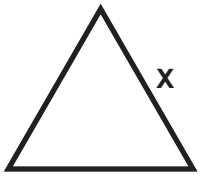
Perimeter = 20 cm

4



Perimeter = 114 ft

5 This equilateral triangle has a perimeter of 60 mm. What is the length of side X?



6 This regular pentagon has a perimeter of 25 km. What is the length of side X?

math Antics Worksheets

Name:

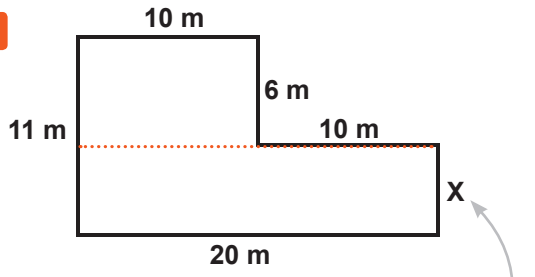
Date:

Perimeter : Missing Information Problems

G-PER 6

Instructions: Find the perimeter of each polygon. (Hint: Use what you *do* know to figure out what you *don't* know.) Remember that you can add up the sides in any order that is easiest for you.

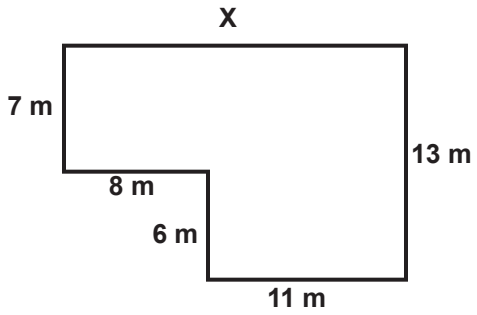
1



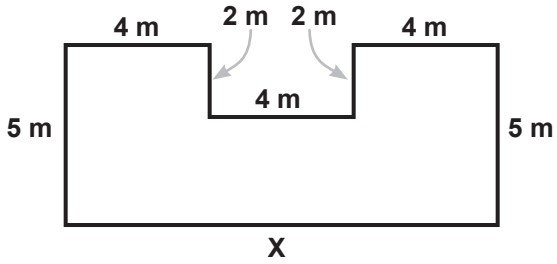
11 - 6 = 5 m

1
20
10
10
11
5
+ 6
62 m

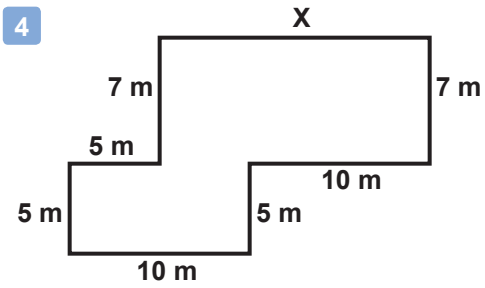
2



3



4



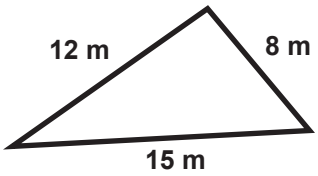
math Antics
Exercises

Name:

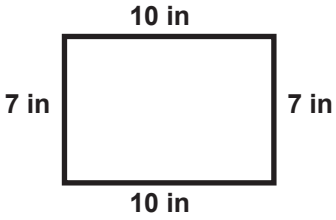
Date:

Perimeter

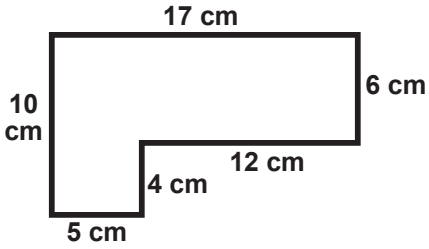
1 Find the perimeter of this triangle.



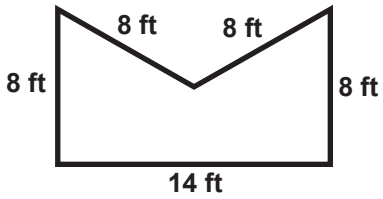
2 Find the perimeter of this rectangle.



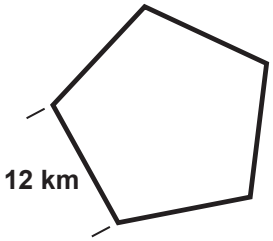
3 Find the perimeter of this polygon.



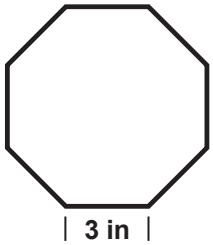
4 Find the perimeter of this polygon.



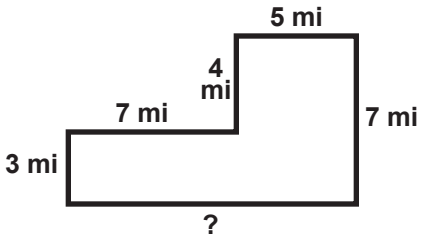
5 Find the perimeter of this **regular** pentagon.



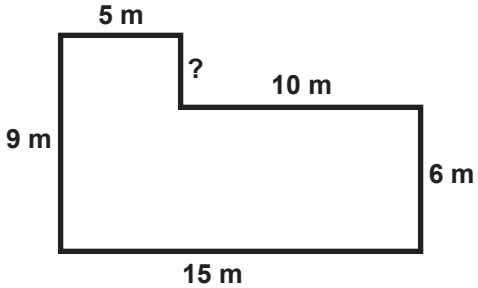
6 Find the perimeter of this **regular** octagon.



7 Find the perimeter. Use what you do know to find the side you don't know.



8 Find the perimeter.



math Antics Worksheets

Name: _____

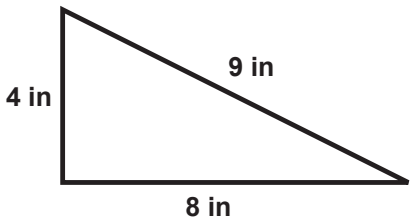
Date: _____

Finding the Perimeter of Triangles

G-PER 1

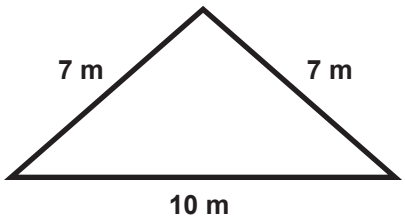
Instructions: Find the perimeter of each triangle by adding up the lengths of it's three sides. Don't forget your units!

1



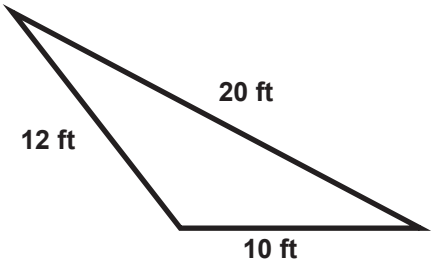
8 + 9 + 4 = 21 in

2



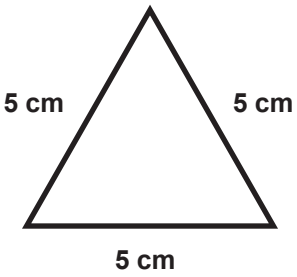
7 + 7 + 10 = 24 m

3



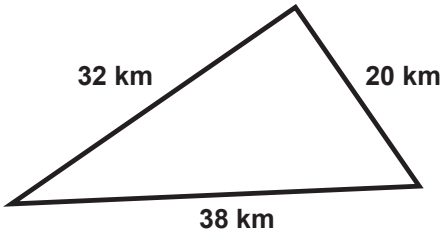
10 + 20 + 12 = 42 ft

4



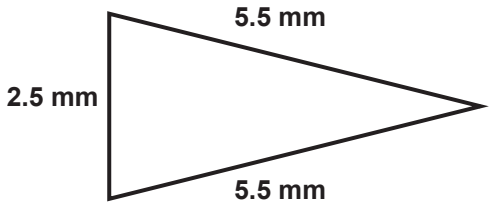
5 + 5 + 5 = 15 cm

5



$$\begin{array}{r} {\scriptstyle 1} \\ 38 \\ 32 \\ +\ 20 \\ \hline 90 \end{array}$$ 90 km

6



$$\begin{array}{r} {\scriptstyle 1} \\ 5.5 \\ 5.5 \\ +\ 2.5 \\ \hline 13.5 \end{array}$$ 13.5 mm

math Antics Worksheets

Name: _____

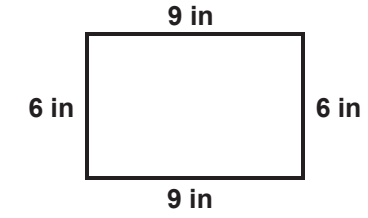
Date: _____

Finding the Perimeter of Rectangles

G-PER 2

Instructions: Find the perimeter of each rectangle by adding up the lengths of it's four sides. Remember that you can add the sides in any order you want to. Don't forget your units!

1

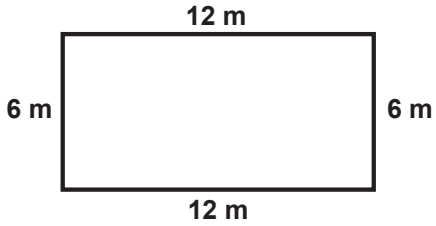


9 + 9 = 18

6 + 6 = 12

$$\begin{array}{r} {\scriptstyle 1} \\ 18 \\ +\ 12 \\ \hline 30 \end{array}$$ in

2

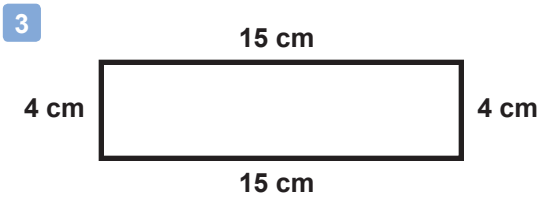


12 + 12 = 24

6 + 6 = 12

$$\begin{array}{r} 24 \\ +\ 12 \\ \hline 36 \end{array}$$ m

3



15 + 15 = 30

4 + 4 = 8

$$\begin{array}{r} 30 \\ +\ 8 \\ \hline 38 \end{array}$$ cm

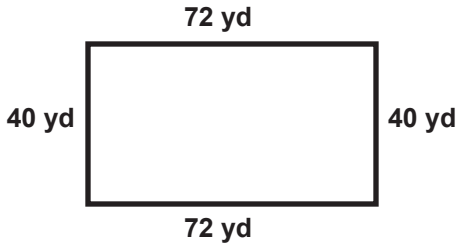
4

32 + 32 = 64

19 + 19 = 38

$$\begin{array}{r} {\scriptstyle 1} \\ 64 \\ +\ 38 \\ \hline 102 \end{array}$$ mm

5

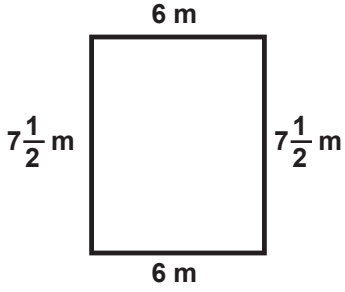


72 + 72 = 144

40 + 40 = 80

$$\begin{array}{r} {\scriptstyle 1} \\ 144 \\ +\ 80 \\ \hline 224 \end{array}$$ yd

6



$7\frac{1}{2} + 7\frac{1}{2} = 15$

6 + 6 = 12

$$\begin{array}{r} 15 \\ +\ 12 \\ \hline 27 \end{array}$$ m

math Antics Worksheets

Name: _____

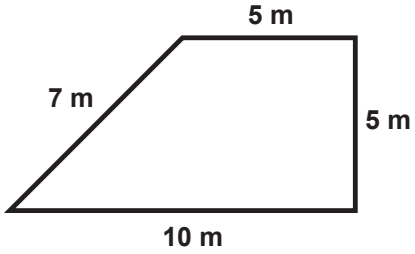
Date: _____

Finding the Perimeter of Polygons

G-PER 3

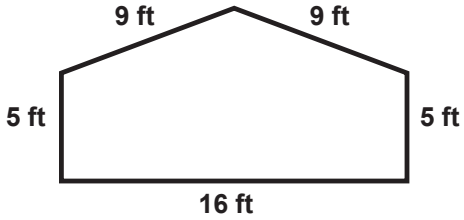
Instructions: Find the perimeter of each polygon by adding up the lengths of all of it's sides. You can add the sides in any order you want to. Don't forget your units!

1



5 + 5 + 10 + 7 = 27 m

2

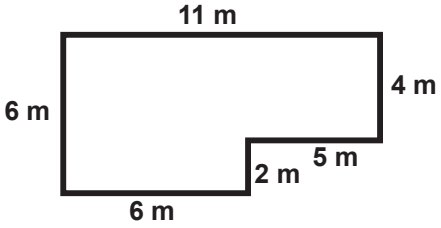


16 + 5 + 5 = 26 → 1 26

9 + 9 = 18 → + 18

44 ft

3

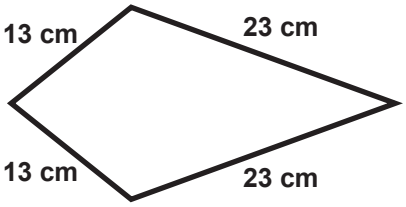


6 + 6 + 11 = 23 → 23

4 + 5 + 2 = 11 → + 11

34 m

4

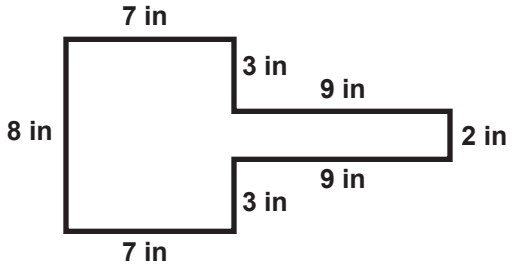


13 + 13 = 26 → 1 26

23 + 23 = 46 → + 46

72 cm

5

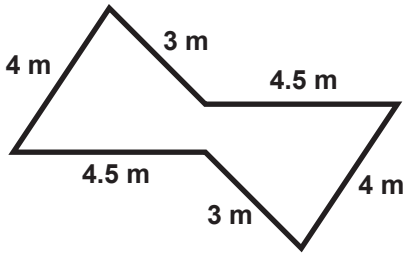


3 + 7 + 3 + 7 + 8 = 28 → 28

9 + 9 + 2 = 20 → + 20

48 in

6



4 + 4 + 3 + 3 = 14 → 1 14

4.5 + 4.5 = 9 → + 9

23 m

math Antics Worksheets

Name:

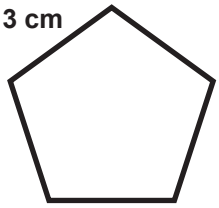
Date:

Finding the Perimeter of Regular Polygons

G-PER 4

Instructions: Find the perimeter of each **regular** polygon by adding up the lengths of all it's sides. Since these are regular polygons, use multiplication as a shortcut. Don't forget your units!

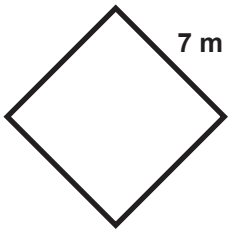
1



5 equal sides, 3 cm per side

5 × 3 = 15 cm

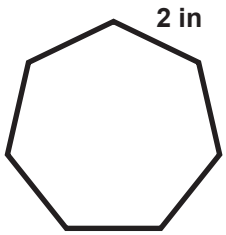
2



4 equal sides, 7 m per side

4 × 7 = 28 m

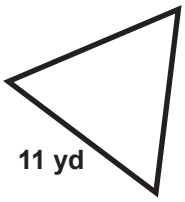
3



7 equal sides, 2 inches per side

7 × 2 = 14 in

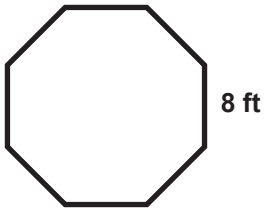
4



3 equal sides, 11 yd per side

3 × 11 = 33 yd

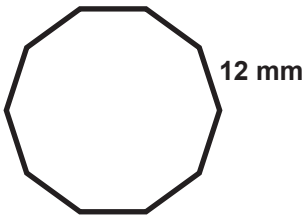
5



8 equal sides, 8 ft per side

8 × 8 = 64 ft

6



10 equal sides, 12 mm per side

10 × 12 = 120 mm

math Antics Worksheets

Name:

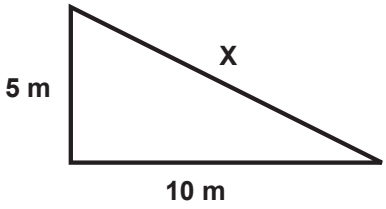
Date:

Using the Perimeter to Find a Missing Side

G-PER 5

Instructions: Use the perimeter of each polygon to figure out the length of the missing side (X). (Hint: Subtract the sum of the sides you *do* know from the total perimeter and see what is left over.)

1



Perimeter = 26 m

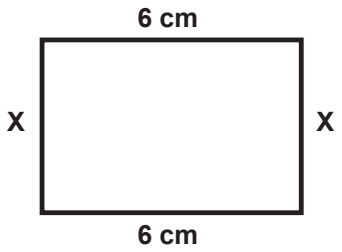
X = 26 - (5 + 10)
X = 26 - 15
X = 11 m

2

Perimeter = 44 in

X = 44 - (20 + 11)
X = 44 - 31
X = 13 in

3



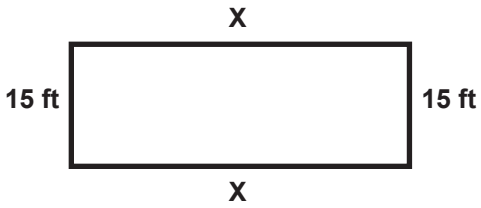
Perimeter = 20 cm

20 - (6 + 6) = 8

Since the opposite sides of a rectangle are equal, X must be half of this leftover amount.

8 ÷ 2 = 4 so X = 4 cm

4

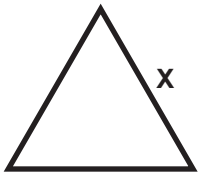


Perimeter = 114 ft

114 - (15 + 15) = 84

84 ÷ 2 = 42 so X = 42 ft

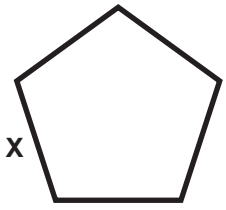
5 This equilateral triangle has a perimeter of 60 mm. What is the length of side X?



Because all 3 sides are equal, we can just divide the total by 3.

X = 60 ÷ 3
X = 20 mm

6 This regular pentagon has a perimeter of 25 km. What is the length of side X?



Because all 5 sides are equal, we can just divide the total by 5.

X = 25 ÷ 5
X = 5 km

math Antics Worksheets

Name: _____

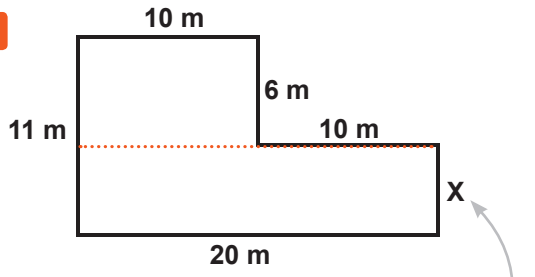
Date: _____

Perimeter : Missing Information Problems

G-PER 6

Instructions: Find the perimeter of each polygon. (Hint: Use what you *do* know to figure out what you *don't* know.) Remember that you can add up the sides in any order that is easiest for you.

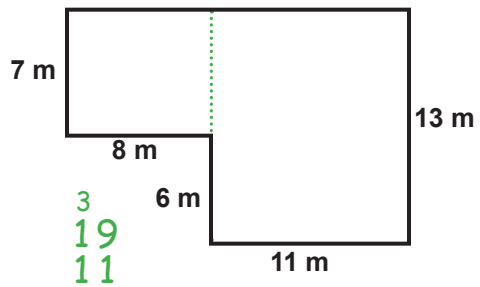
1



11 - 6 = 5 m

1
20
10
10
11
5
+ 6
62 m

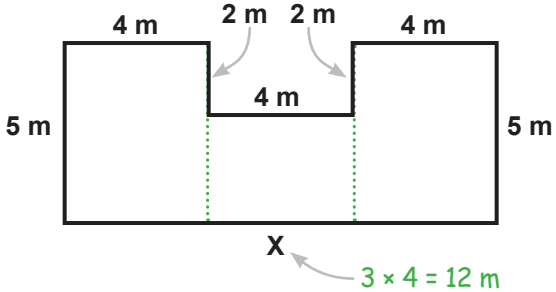
2



11 + 8 = 19 m

3
19
11
13
7
8
+ 6
64 m

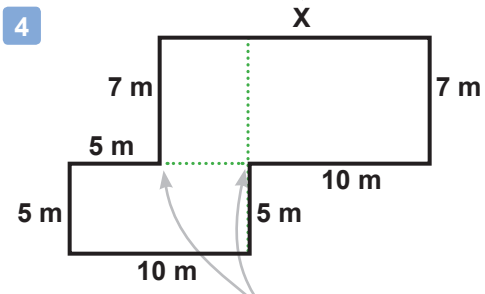
3



3 × 4 = 12 m

2
12
5
5
4
4
4
2
+ 2
38 m

4



10 + 5 = 15 m

This length must be 5 m because 10 - 5 = 5

That means X must be 10 + 5 which is 15 m

3
15
10
10
5
5
5
7
+ 7
64 m

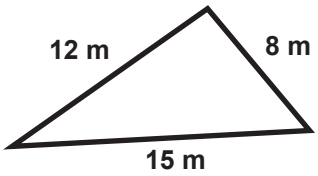
math Antics
Exercises

Name:

Date:

Perimeter

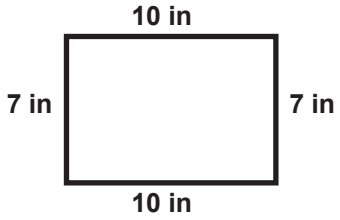
1 Find the perimeter of this triangle.



$$\begin{array}{r} {\scriptstyle 1}\\ 15\\ 12\\ +\ \ 8\\ \hline 35 \end{array}$$

P = 35 m

2 Find the perimeter of this rectangle.



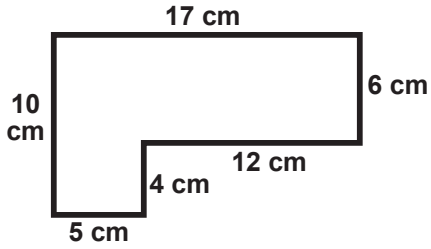
10 + 10 = 20

7 + 7 = 14

$$\begin{array}{r} 20\\ +\ 14\\ \hline 34 \end{array}$$

P = 34 in

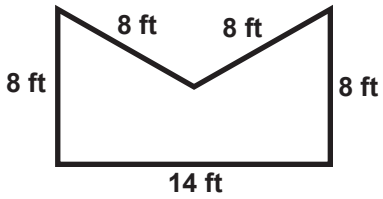
3 Find the perimeter of this polygon.



$$\begin{array}{r} {\scriptstyle 2}\\ 17\\ 12\\ 10\\ 6\\ 4\\ +\ \ 5\\ \hline 54 \end{array}$$

P = 54 cm

4 Find the perimeter of this polygon.

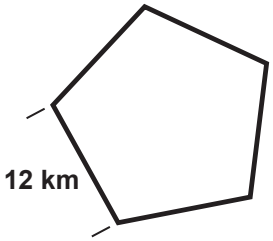


4 × 8 = 32

$$\begin{array}{r} 32\\ +\ 14\\ \hline 46 \end{array}$$

P = 46 ft

5 Find the perimeter of this **regular** pentagon.



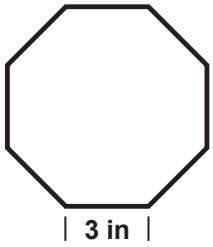
5 equal sides

12 km per side

5 × 12 = 60

P = 60 km

6 Find the perimeter of this **regular** octagon.



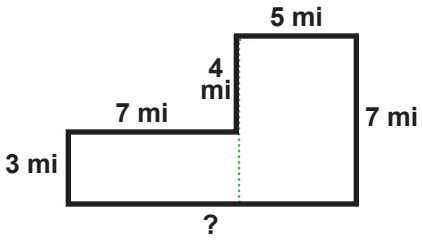
8 equal sides

3 inches per side

3 × 8 = 24

P = 24 in

7 Find the perimeter. Use what you do know to find the side you don't know.

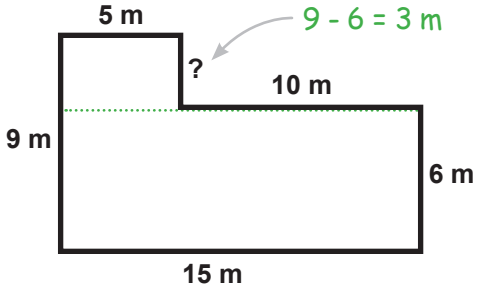


7 + 5 = 12 mi

$$\begin{array}{r} {\scriptstyle 2}\\ 12\\ 7\\ 7\\ 3\\ 4\\ +\ \ 5\\ \hline 38 \end{array}$$

P = 38 mi

8 Find the perimeter.



$$\begin{array}{r} {\scriptstyle 2}\\ 15\\ 10\\ 5\\ 9\\ 6\\ +\ \ 3\\ \hline 48 \end{array}$$

P = 48 m

See Video for step-by-step solutions to each problem.

math Antics Worksheets

Name:

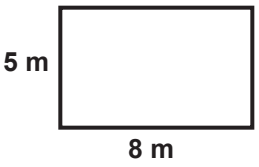
Date:

Finding the Area of Quadrilaterals

G-AREA 1

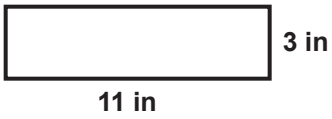
Instructions: Find the area of each square or rectangle using the formula: $A = L \times W$.

1

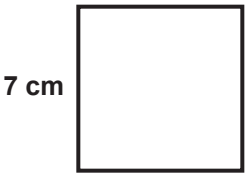


$A = 5 \times 8 = 40\ m^2$

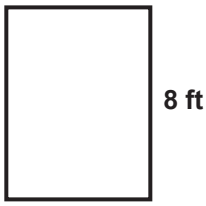
2



3

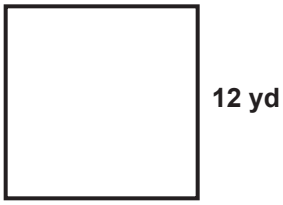


4

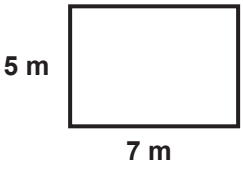


5

6



7



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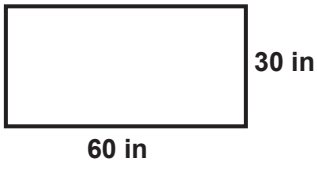


math Antics Worksheets

Name:

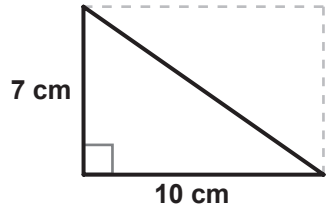
Date:

Finding the Area of Triangles

G-AREA 2

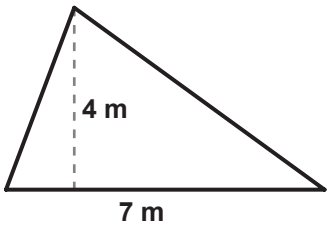
Instructions: Find the area of each triangle using the formula: A = 1/2 (B × H)

1

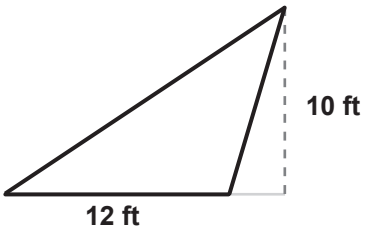


$A = \frac{1}{2}(10 \times 7) = \frac{70}{2} = 35\ cm^2$

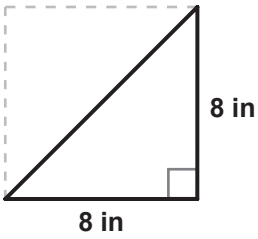
2



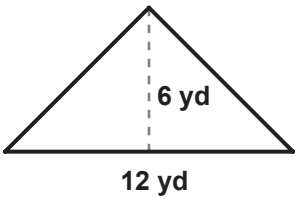
3



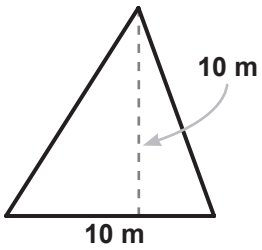
4



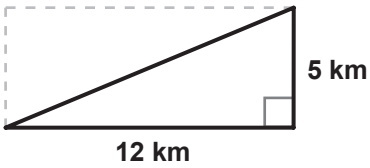
5



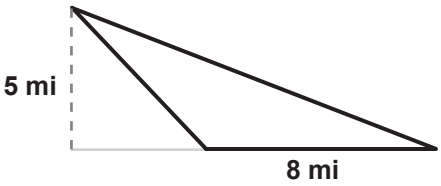
6



7



8



math Antics Worksheets

Name:

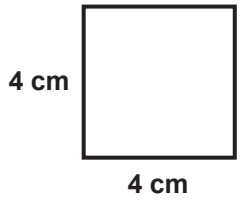
Date:

Finding the Area: Mixed Practice

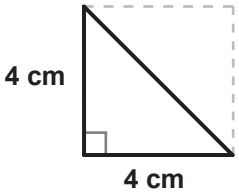
G-AREA 3

Instructions: Find the area of each shape using the formulas you learned in the video.

1

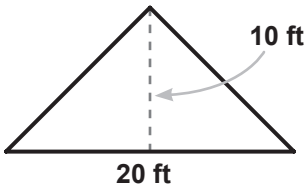


2

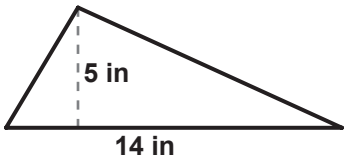


3

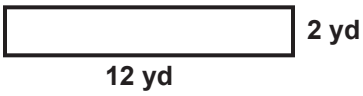
4



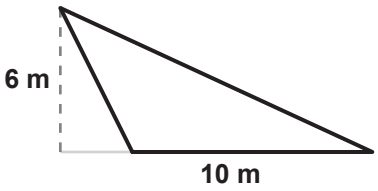
5



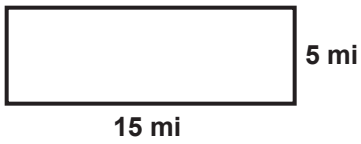
6



7



8



math Antics Worksheets

Name:

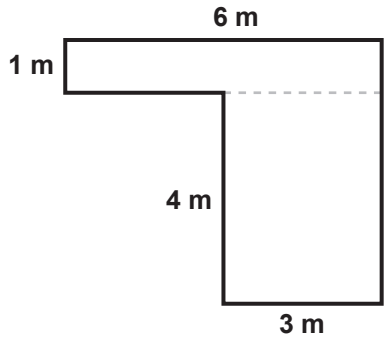
Date:

Finding the Area of Composite Shapes - Set 1

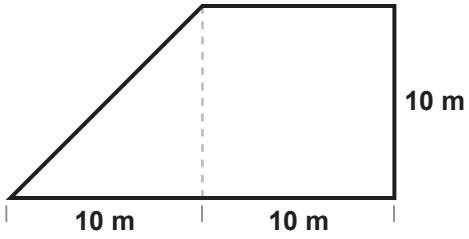
G-AREA 4

Instructions: Each of these shapes is some combination of quadrilaterals and/or triangles. Find the area of the shape by finding the area of each part that forms it and then adding them up.

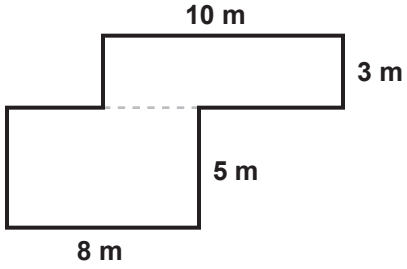
1



2



3



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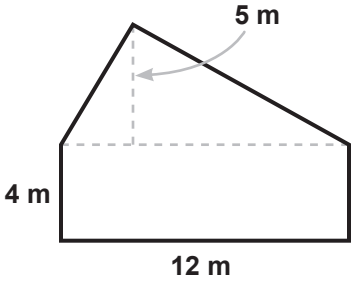


math Antics Worksheets

Name:

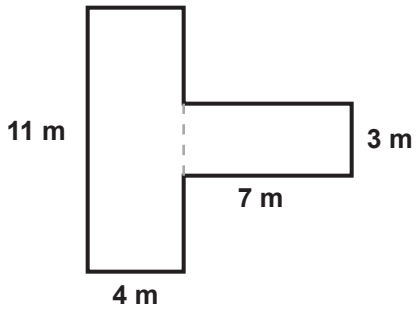
Date:

Finding the Area of Composite Shapes - Set 2

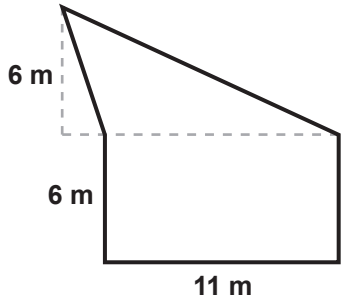
G-AREA 5

Instructions: Each of these shapes is some combination of quadrilaterals and/or triangles. Find the area of the shape by finding the area of each part that forms it and then adding them up.

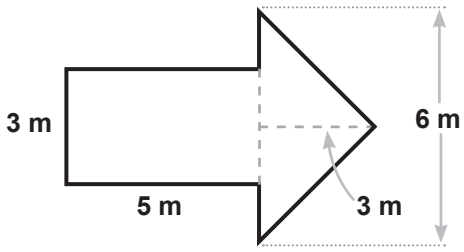
1



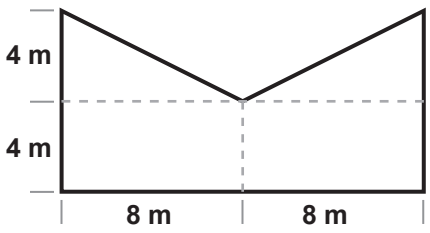
2



3



4



math Antics Worksheets

Name:

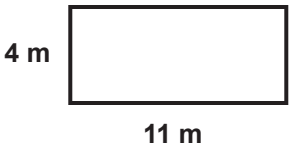
Date:

Finding Area and Perimeter

G-AREA 6

Instructions: Now that you know how to find both the perimeter and area, find both quantities for each of the following shapes. Don't forget to include the units in your answers!

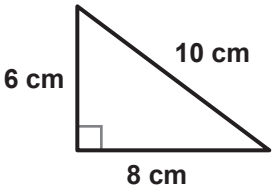
1



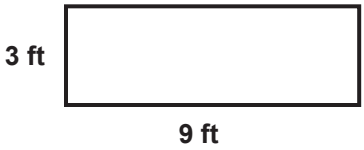
$P = 4 + 11 + 4 + 11 =$ 30 m

$A = 4 \times 11 =$ $44\ m^2$

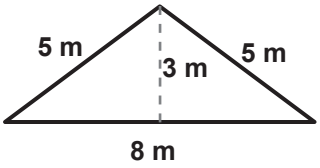
2



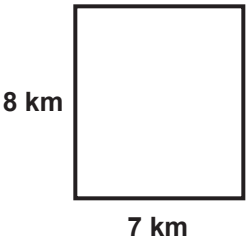
3



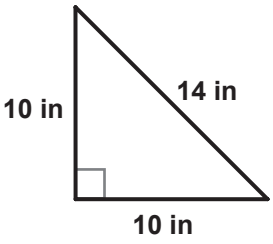
4



5



6



math Antics
Exercises

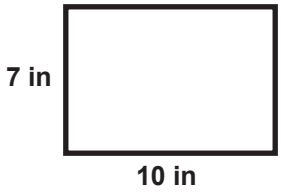
Name:

Date:

Area

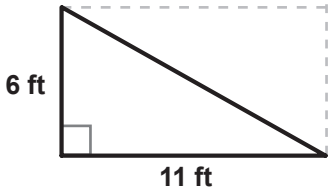
1 Find the area of this square.

2 Find the area of this rectangle.

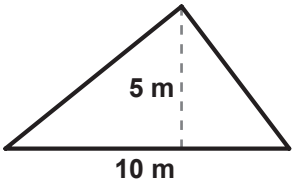


3 Find the area of this rectangle.

4 Find the area of this right triangle.

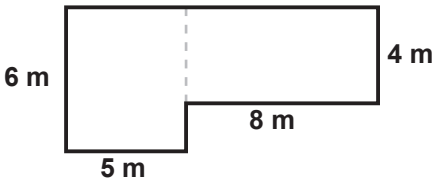


5 Find the area of this acute triangle.

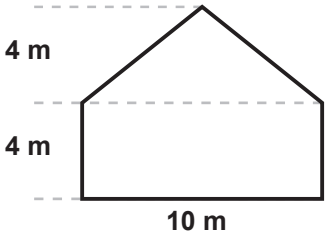


6 Find the area of this obtuse triangle.

7 This shape is a combination of two rectangles. What is its area?



8 This shape is a combination of a triangle and a rectangle. What is its area?



math Antics Worksheets

Name: _____

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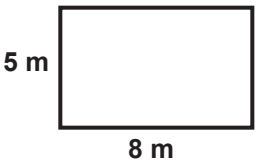
Finding the Area of Quadrilaterals

G-AREA 1

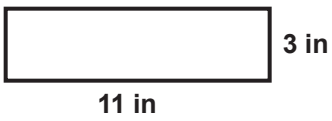
Instructions: Find the area of each square or rectangle using the formula: $A = L \times W$.

1



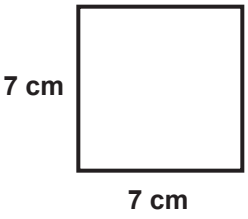
$A = 5 \times 8 =$ 40 m^2

2



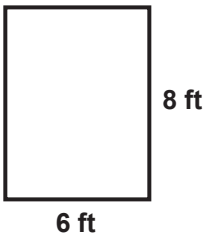
$A = 3 \times 11 =$ 33 in^2

3



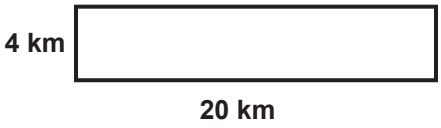
$A = 7 \times 7 =$ 49 cm^2

4



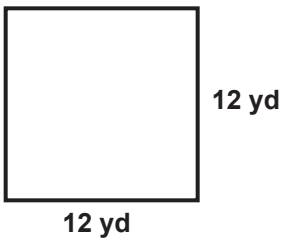
$A = 8 \times 6 =$ 48 ft^2

5



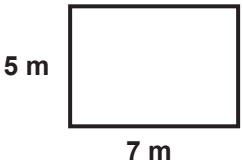
$A = 4 \times 20 =$ 80 km^2

6



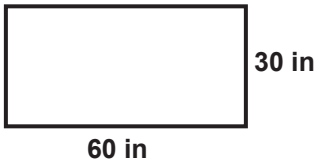
$A = 12 \times 12 =$ 144 yd^2

7



$A = 5 \times 7 =$ 35 m^2

8



$A = 30 \times 60 =$ 1,800 in^2

math Antics Worksheets

Name: _____

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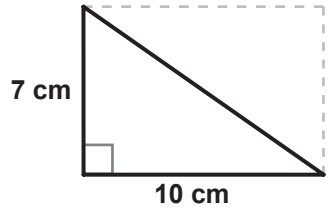
Finding the Area of Triangles

G-AREA 2

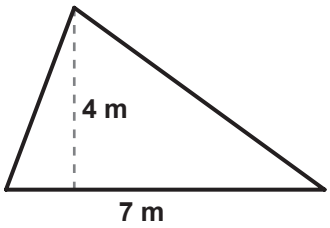
Instructions: Find the area of each triangle using the formula: A = 1/2 (B × H)

1



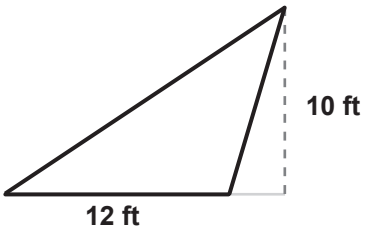
$A = \frac{1}{2}(10 \times 7) = \frac{70}{2} = 35\ cm^2$

2



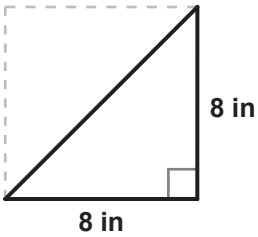
$A = \frac{1}{2}(7 \times 4) = \frac{28}{2} = 14\ m^2$

3



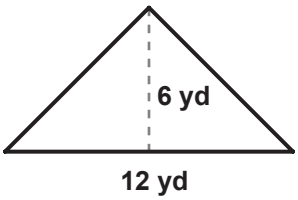
$A = \frac{1}{2}(12 \times 10) = \frac{120}{2} = 60\ ft^2$

4



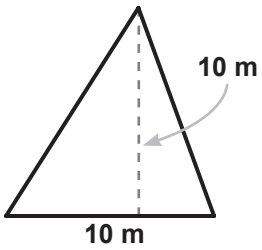
$A = \frac{1}{2}(8 \times 8) = \frac{64}{2} = 32\ in^2$

5



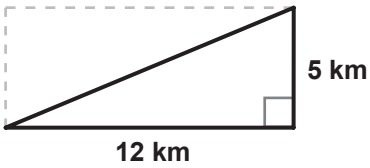
$A = \frac{1}{2}(12 \times 6) = \frac{72}{2} = 36\ yd^2$

6



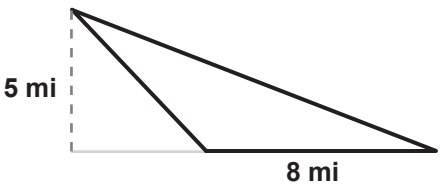
$A = \frac{1}{2}(10 \times 10) = \frac{100}{2} = 50\ m^2$

7



$A = \frac{1}{2}(12 \times 5) = \frac{60}{2} = 30\ km^2$

8



$A = \frac{1}{2}(8 \times 5) = \frac{40}{2} = 20\ mi^2$

math Antics Worksheets

Name: _____

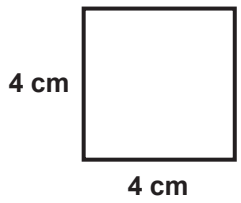
Date: _____

Finding the Area: Mixed Practice

G-AREA 3

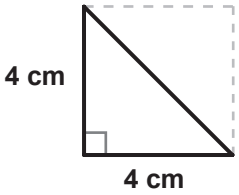
Instructions: Find the area of each shape using the formulas you learned in the video.

1



$A = 4 \times 4 = 16\ cm^2$

2

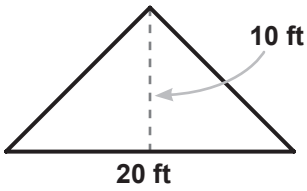


$A = \frac{1}{2}(4 \times 4) = \frac{16}{2} = 8\ cm^2$

3

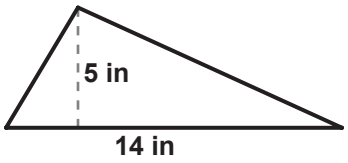
$A = 20 \times 10 = 200\ ft^2$

4



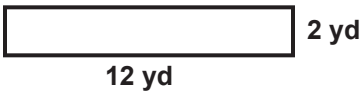
$A = \frac{1}{2}(20 \times 10) = \frac{200}{2} = 100\ ft^2$

5



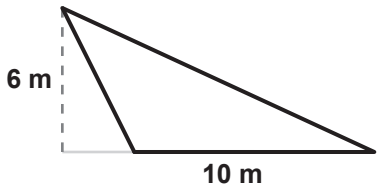
$A = \frac{1}{2}(14 \times 5) = \frac{70}{2} = 35\ in^2$

6



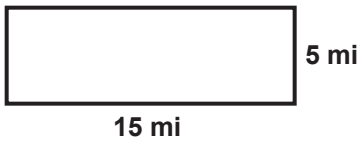
$A = 2 \times 12 = 24\ yd^2$

7



$A = \frac{1}{2}(10 \times 6) = \frac{60}{2} = 30\ m^2$

8



$A = 15 \times 5 = 75\ mi^2$

math Antics Worksheets

Name: _____

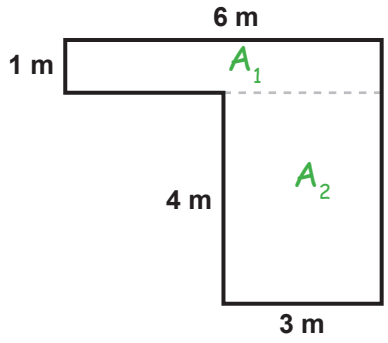
Date: _____

Finding the Area of Composite Shapes - Set 1

G-AREA 4

Instructions: Each of these shapes is some combination of quadrilaterals and/or triangles. Find the area of the shape by finding the area of each part that forms it and then adding them up.

1

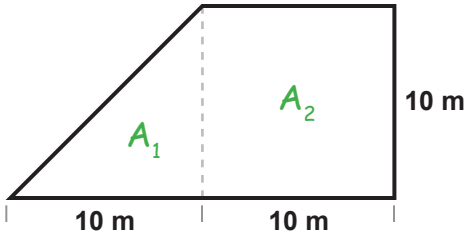


$A_1 = 1 \times 6 = 6 \text{ m}^2$

$A_2 = 4 \times 3 = 12 \text{ m}^2$

total
12
+ 6
18 m²

2

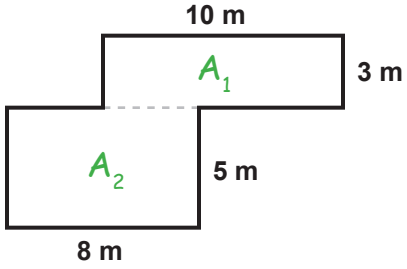


$A_1 = \frac{1}{2}(10 \times 10) = \frac{100}{2} = 50 \text{ m}^2$

$A_2 = 10 \times 10 = 100 \text{ m}^2$

total
100
+ 50
150 m²

3

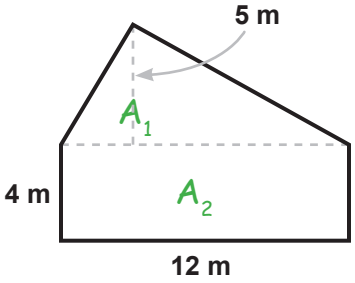


$A_1 = 3 \times 10 = 30 \text{ m}^2$

$A_2 = 5 \times 8 = 40 \text{ m}^2$

total
30
+ 40
70 m²

4



$A_1 = \frac{1}{2}(12 \times 5) = \frac{60}{2} = 30 \text{ m}^2$

$A_2 = 4 \times 12 = 48 \text{ m}^2$

total
30
+ 48
78 m²

math Antics Worksheets

Name: _____

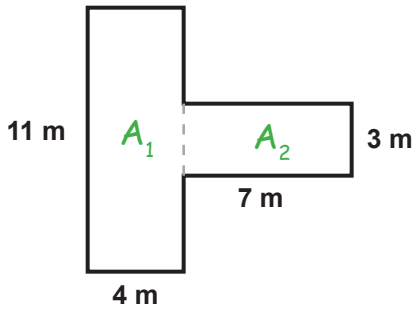
Date: _____

Finding the Area of Composite Shapes - Set 2

G-AREA 5

Instructions: Each of these shapes is some combination of quadrilaterals and/or triangles. Find the area of the shape by finding the area of each part that forms it and then adding them up.

1



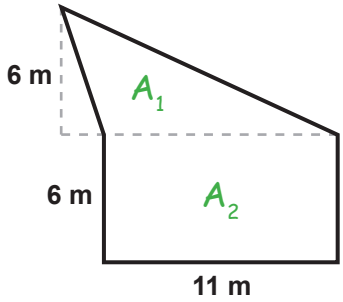
$A_1 = 4 \times 11 = 44 \text{ m}^2$

$A_2 = 7 \times 3 = 21 \text{ m}^2$

total

44
+ 21
65 m²

2



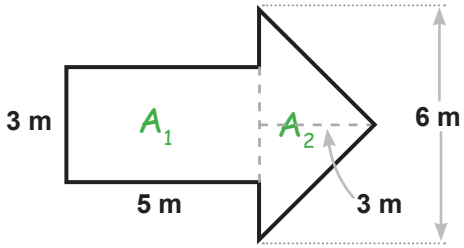
$A_1 = \frac{1}{2}(11 \times 6) = \frac{66}{2} = 33 \text{ m}^2$

$A_2 = 11 \times 6 = 66 \text{ m}^2$

total

33
+ 66
99 m²

3



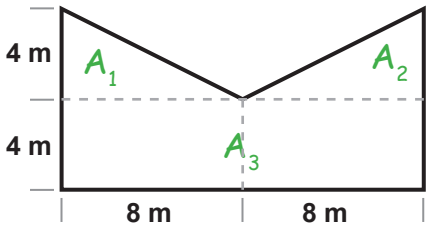
$A_1 = 3 \times 5 = 15 \text{ m}^2$

$A_2 = \frac{1}{2}(6 \times 3) = \frac{18}{2} = 9 \text{ m}^2$

total

15
+ 9
24 m²

4



$A_1 = \frac{1}{2}(8 \times 4) = \frac{32}{2} = 16 \text{ m}^2$

$A_2 =$ same as $A_1 = 16 \text{ m}^2$

$A_3 = 4 \times 16 = 64 \text{ m}^2$

total

1
16
16
+ 64
96 m²

math Antics Worksheets

Name: _____

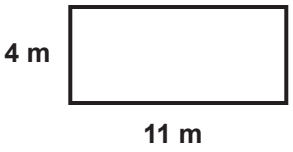
Date: _____

Finding Area and Perimeter

G-AREA 6

Instructions: Now that you know how to find both the perimeter and area, find both quantities for each of the following shapes. Don't forget to include the units in your answers!

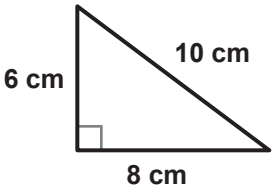
1



$P = 4 + 11 + 4 + 11 =$ 30 m

$A = 4 \times 11 =$ 44 m^2

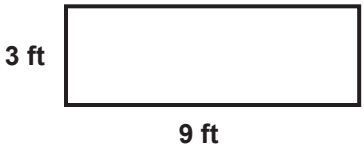
2



$P = 6 + 8 + 10 =$ 24 cm

$A = \frac{1}{2}(8 \times 6) = \frac{48}{2} =$ 24 cm^2

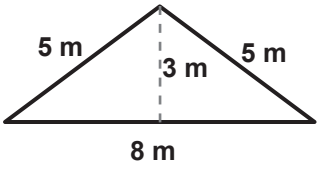
3



$P = 3 + 9 + 3 + 9 =$ 24 ft

$A = 3 \times 9 =$ 27 ft^2

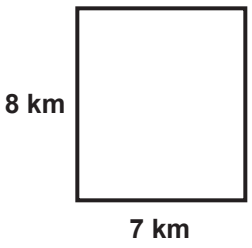
4



$P = 5 + 5 + 8 =$ 18 m

$A = \frac{1}{2}(8 \times 3) = \frac{24}{2} =$ 12 m^2

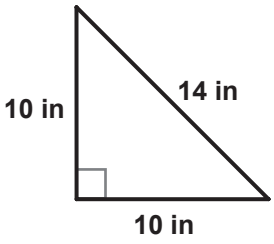
5



$P = 7 + 8 + 7 + 8 =$ 30 km

$A = 7 \times 8 =$ 56 km^2

6



$P = 10 + 10 + 14 =$ 34 in

$A = \frac{1}{2}(10 \times 10) = \frac{100}{2} =$ 50 in^2

math Antics
Exercises

Name: _____

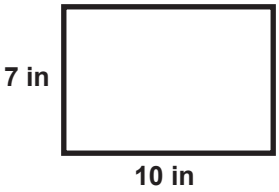
Date: _____

Area

1 Find the area of this square.

$A = 3 \times 3 = 9\ cm^2$

2 Find the area of this rectangle.

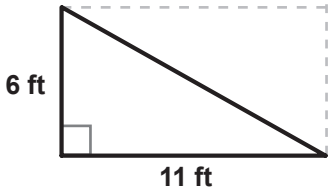


$A = 7 \times 10 = 70\ in^2$

3 Find the area of this rectangle.

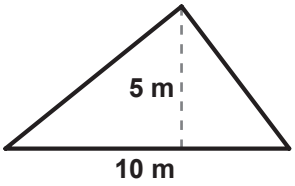
$A = 2 \times 12 = 24\ km^2$

4 Find the area of this right triangle.



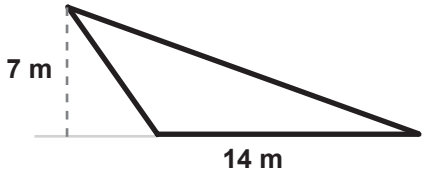
$A = \frac{1}{2}(6 \times 11) = \frac{66}{2} = 33\ ft^2$

5 Find the area of this acute triangle.



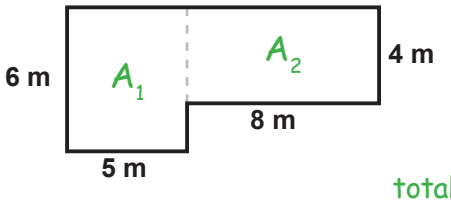
$A = \frac{1}{2}(5 \times 10) = \frac{50}{2} = 25\ m^2$

6 Find the area of this obtuse triangle.



$A = \frac{1}{2}(7 \times 14) = 7 \times \frac{14}{2} = 49\ m^2$

7 This shape is a combination of two rectangles. What is its area?



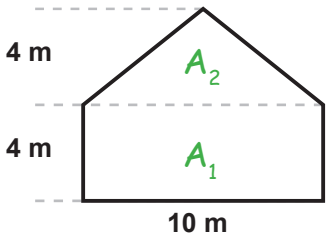
$A_1 = 6 \times 5 = 30\ m^2$

$A_2 = 8 \times 4 = 32\ m^2$

total

$30 + 32 = 62\ m^2$

8 This shape is a combination of a triangle and a rectangle. What is its area?



$A_1 = 4 \times 10 = 40\ m^2$

$A_2 = \frac{1}{2}(4 \times 10) = 20\ m^2$

total

$40 + 20 = 60\ m^2$

See Video for step-by-step solutions to each problem.

math Antics Worksheets

Name: _____

Date: _____

Diameter and Radius

G-CPI 1

Instructions: In each problem below, calculate either the diameter or the radius from the information given.

1 **If the diameter of a circle is 8 feet, What is the radius?**

Remember that $r = d \div 2$

$r = 8 \div 2$

$r = 4$ ft

2 **If the radius of a circle is 3 cm, What is the diameter?**

Remember that $d = r \times 2$

$d = 3 \times 2$

$d = 6$ cm

3 **If the diameter of a circle is 20 inches, What is the radius?**

4 **If the radius of a circle is 9 meters, What is the diameter?**

5 **If the diameter of a circle is 64 cm, What is the radius?**

6 **If the radius of a circle is 15 yards, What is the diameter?**

7 **If the diameter of a circle is 86 feet, What is the radius?**

8 **If the radius of a circle is 16 mm, What is the diameter?**

9 **If the diameter of a circle is 7 inches, What is the radius?**

10 **If the radius of a circle is 2.5 meters, What is the diameter?**

math Antics Exercises

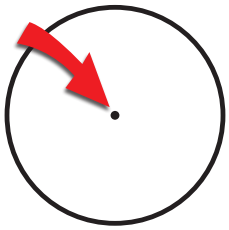
Name: _____

Date: _____

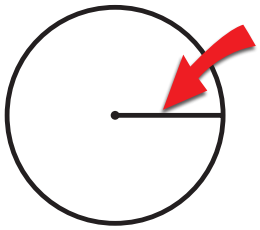
Circles: What is PI?

1 What is this part of a circle called?

_____



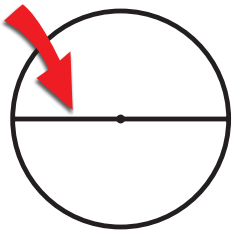
2 What is this part of a circle called?



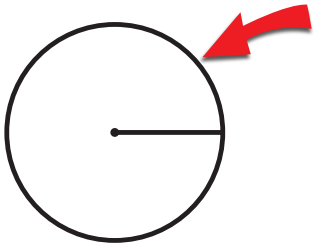
_____

3 What is this part of a circle called?

_____



4 What is this part of a circle called?



_____

5 Fill in the blanks:

PI is the _____

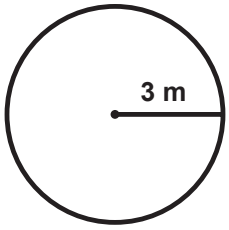
of a circle's _____

to its _____ **.**

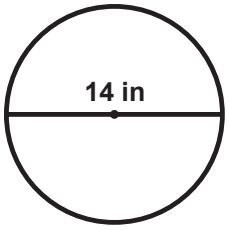
6 What is the numerical value of PI to two decimal places?

π = _____

7 If the radius of a circle is 3 meters, what is the circle's diameter?



8 If the diameter of a circle is 14 inches, what is the circle's radius?



math Antics Worksheets

Name:

Date:

Diameter and Radius

G-CPI 1

Instructions: In each problem below, calculate either the diameter or the radius from the information given.

1 **If the diameter of a circle is 8 feet, What is the radius?**

Remember that $r = d \div 2$

$r = 8 \div 2$

$r = 4$ ft

2 **If the radius of a circle is 3 cm, What is the diameter?**

Remember that $d = r \times 2$

$d = 3 \times 2$

$d = 6$ cm

3 **If the diameter of a circle is 20 inches, What is the radius?**

$r = 20 \div 2$

$r = 10$ in

4 **If the radius of a circle is 9 meters, What is the diameter?**

$d = 9 \times 2$

$d = 18$ m

5 **If the diameter of a circle is 64 cm, What is the radius?**

$r = 64 \div 2$

$r = 32$ cm

6 **If the radius of a circle is 15 yards, What is the diameter?**

$d = 15 \times 2$

$d = 30$ yd

7 **If the diameter of a circle is 86 feet, What is the radius?**

$r = 86 \div 2$

$r = 43$ ft

8 **If the radius of a circle is 16 mm, What is the diameter?**

$d = 16 \times 2$

$d = 32$ mm

9 **If the diameter of a circle is 7 inches, What is the radius?**

$r = 7 \div 2$

$r = 3.5$ in

10 **If the radius of a circle is 2.5 meters, What is the diameter?**

$d = 2.5 \times 2$

$d = 5$ m

math Antics Exercises

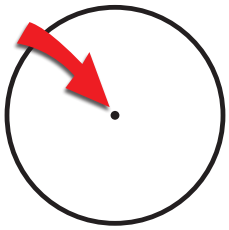
Name: _____

Date: _____

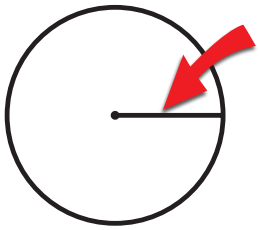
Circles: What is PI?

1 What is this part of a circle called?

center (or origin)



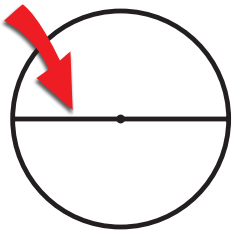
2 What is this part of a circle called?



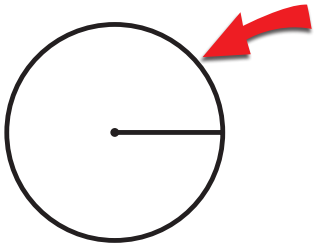
radius

3 What is this part of a circle called?

diameter



4 What is this part of a circle called?



circumference (or perimeter)

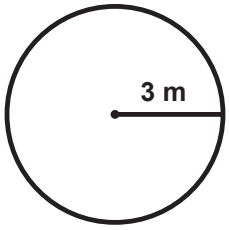
5 Fill in the blanks:

PI is the ratio **of a circle's** circumference **to its** diameter**.**

6 What is the numerical value of PI to two decimal places?

π = 3.14

7 If the radius of a circle is 3 meters, what is the circle's diameter?

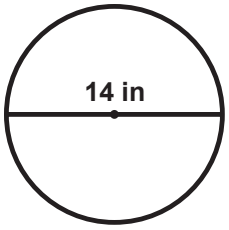


d = 2 x r

d = 2 x 3

d = 6 meters

8 If the diameter of a circle is 14 inches, what is the circle's radius?



r = d ÷ 2

r = 14 ÷ 2

r = 7 inches

See Video for step-by-step solutions to each problem.

math Antics Worksheets

Name:

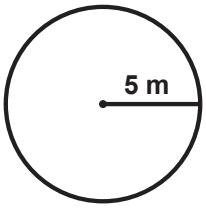
Date:

Estimating Circumference and Area

G-CCA 1

Instructions: A good way to quickly estimate the circumference and area of a circle is to round PI off to the whole number '3' (instead of using 3.14). Use PI = 3 to estimate the circumference and area of each of the circles below.

1

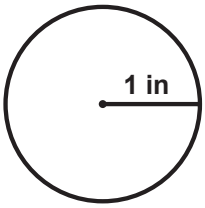


r = 5 m
so
d = 10 m

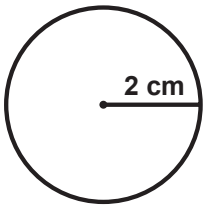
$C = \pi \times d$
$C = 3 \times 10$
$C = 30$ m

$A = \pi \times r^2$
$A = 3 \times (5 \times 5)$
$A = 75$ m^2

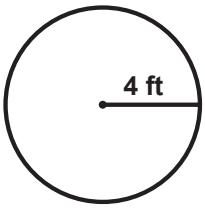
2



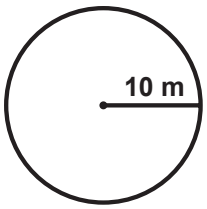
3



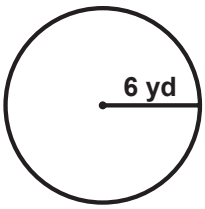
4



5



6



math Antics Worksheets

Name:

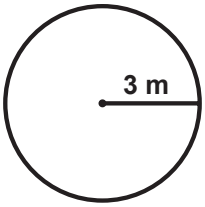
Date:

Calculating Circumference

G-CCA 2

Instructions: Use the formula you learned in the video to calculate the circumference of each circle below. Use PI = 3.14 and round your answers to two decimal places. You can use a calculator.
(Note: Sometimes the problem gives you the radius, but sometimes it gives you the diameter.)

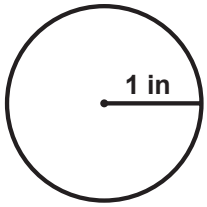
1



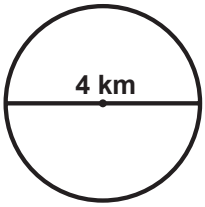
d = 3 x 2 = 6 m

C = π x d
C = 3.14 x 6 m
C = 18.84 m

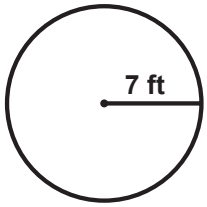
2



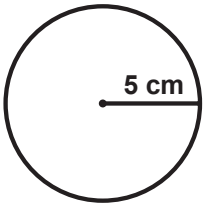
3



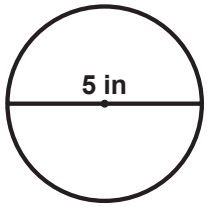
4



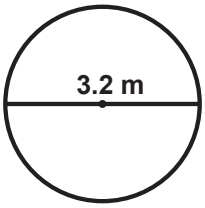
5



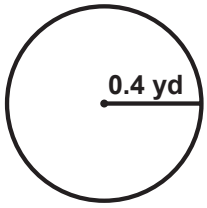
6



7



8



math Antics Worksheets

Name:

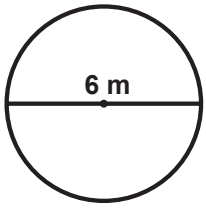
Date:

Calculating Area

G-CCA 3

Instructions: Use the formula you learned in the video to calculate the area of each circle below. Use PI = 3.14 and round your answers to two decimal places. You can use a calculator.
(Note: Sometimes the problem gives you the radius, but sometimes it gives you the diameter.)

1



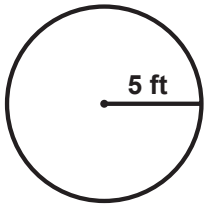
$A = \pi \times r^2$

$A = 3.14 \times (3 \times 3)$

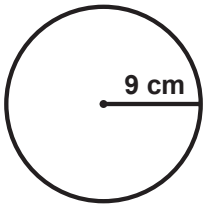
$A = 28.26\ m^2$

$r = \frac{6}{2} = 3\ m$

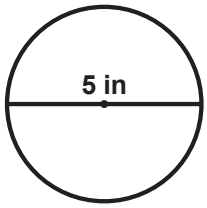
2



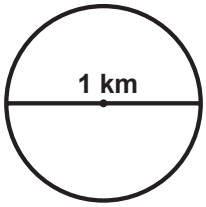
3



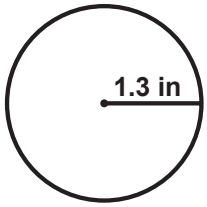
4



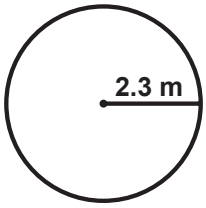
5



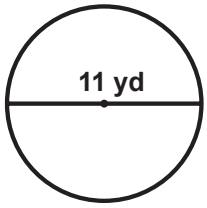
6



7



8



math Antics Worksheets

Name:

Date:

Calculating Circumference and Area

G-CCA 4

Instructions: For the following problems, use PI = 3.14 You may use a calculator. If necessary, round your answers to two decimal places.

1. A circle has a radius of 1.5 meters. Find its circumference and area.

2. A circle has a diameter of 26 feet. Find its circumference and area.

3. A circle has a diameter of 40 miles. Find its circumference and area.

4. A circle has a radius of 3.5 centimeters. Find its circumference and area.

5. A circle has a diameter of 16 inches. Find its circumference and area.

6. A circle has a radius of 0.3 meters. Find its circumference and area.

math Antics Worksheets

Name:

Date:

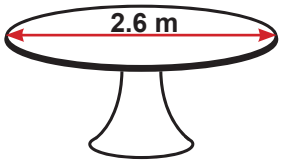
Circumference and Area - Word Problems

G-CCA 5

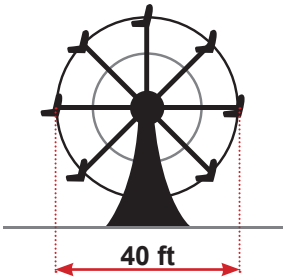
Instructions: For the following problems, use PI = 3.14. You may use a calculator. If necessary, round your answers to two decimal places.

1 A bicycle tire has a radius of 14 inches. What is the circumference of the tire?

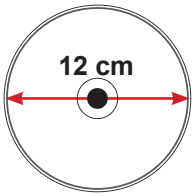
2 A round table top has a diameter of 2.6 meters. What is its surface area?



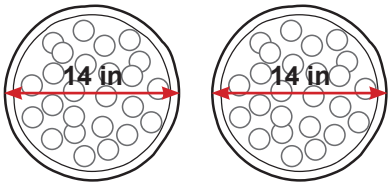
3 A Ferris-Wheel at an amusement park has a diameter of 40 feet. How far would you travel in one revolution? (In other words, find the circumference.)

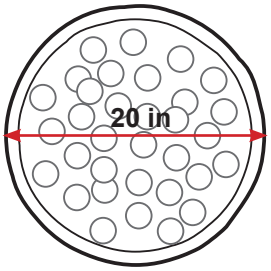


4 A DVD disc has a diameter of 12 centimeters. What is the surface area of one side of the disc?



5 Which has the greatest surface area: two pizzas that have 14 inch diameters or one pizza that has a 20 inch diameter?





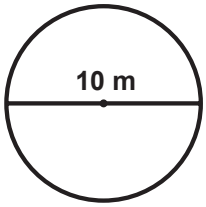
math Antics
Exercises

Name:

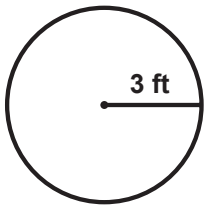
Date:

Circles: Circumference & Area

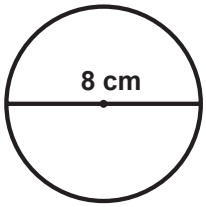
1 Estimate the circumference of this circle by using a rounded-off value of 3 for PI.



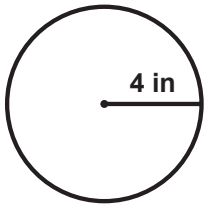
2 Estimate the area of this circle by using a rounded-off value of 3 for PI.



3 Calculate the circumference of this circle using the more accurate value of PI = 3.14



4 Calculate the area of this circle using the more accurate value of PI = 3.14



5 If the radius of a circle is 2.5 meters, what is its circumference?

6 If the diameter of a circle is 22 inches, what is its area?

7 A circle has a radius of 1.2 meters. Find its circumference and area. (Round answers to the nearest tenth)

8 A circle has a diameter of 15 feet. Find its circumference and area. (Round answers to the nearest tenth)

math Antics Worksheets

Name: _____

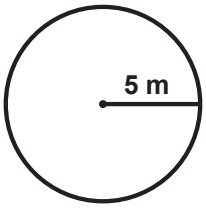
Date: _____

Estimating Circumference and Area

G-CCA 1

Instructions: A good way to quickly estimate the circumference and area of a circle is to round PI off to the whole number '3' (instead of using 3.14). Use PI = 3 to estimate the circumference and area of each of the circles below.

1

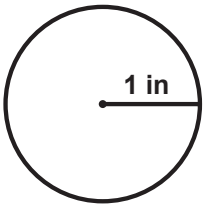


r = 5 m
so
d = 10 m

$C = \pi \times d$
$C = 3 \times 10$
$C = 30$ m

$A = \pi \times r^2$
$A = 3 \times (5 \times 5)$
$A = 75$ m^2

2

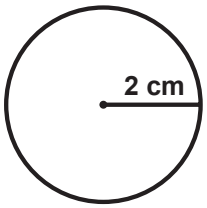


r = 1 in
so
d = 2 in

$C = \pi \times d$
$C = 3 \times 2$
$C = 6$ in

$A = \pi \times r^2$
$A = 3 \times (1 \times 1)$
$A = 3$ in^2

3

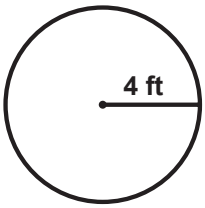


r = 2 cm
so
d = 4 cm

$C = \pi \times d$
$C = 3 \times 4$
$C = 12$ cm

$A = \pi \times r^2$
$A = 3 \times (2 \times 2)$
$A = 12$ cm^2

4

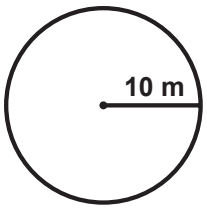


r = 4 ft
so
d = 8 ft

$C = \pi \times d$
$C = 3 \times 8$
$C = 24$ ft

$A = \pi \times r^2$
$A = 3 \times (4 \times 4)$
$A = 48$ ft^2

5

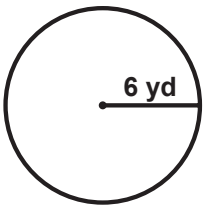


r = 10 m
so
d = 20 m

$C = \pi \times d$
$C = 3 \times 20$
$C = 60$ m

$A = \pi \times r^2$
$A = 3 \times (10 \times 10)$
$A = 300$ m^2

6



r = 6 yd
so
d = 12 yd

$C = \pi \times d$
$C = 3 \times 12$
$C = 36$ yd

$A = \pi \times r^2$
$A = 3 \times (6 \times 6)$
$A = 108$ yd^2

math Antics Worksheets

Name: _____

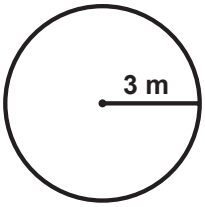
Date: _____

Calculating Circumference

G-CCA 2

Instructions: Use the formula you learned in the video to calculate the circumference of each circle below. Use PI = 3.14 and round your answers to two decimal places. You can use a calculator.
(Note: Sometimes the problem gives you the radius, but sometimes it gives you the diameter.)

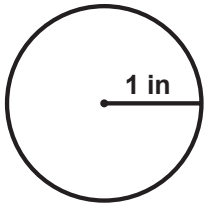
1



d = 3 x 2 = 6 m

C = π x d
C = 3.14 x 6 m
C = 18.84 m

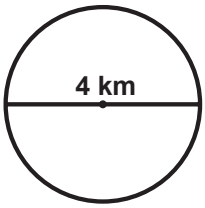
2



d = 1 x 2 = 2 in

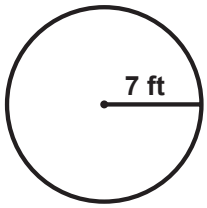
C = π x d
C = 3.14 x 2 in
C = 6.28 in

3



C = π x d
C = 3.14 x 4 km
C = 12.56 km

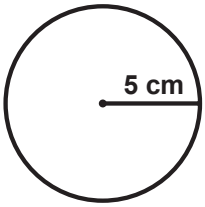
4



d = 7 x 2 = 14 ft

C = π x d
C = 3.14 x 14 ft
C = 43.96 ft

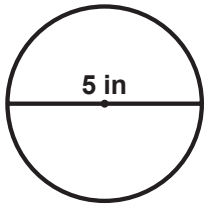
5



d = 5 x 2 = 10 cm

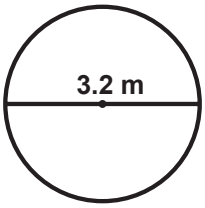
C = π x d
C = 3.14 x 10 cm
C = 31.4 cm

6



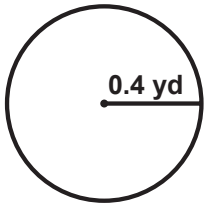
C = π x d
C = 3.14 x 5 in
C = 15.7 in

7



C = π x d
C = 3.14 x 3.2 m
C = 10.05 m

8



d = 0.4 x 2 = 0.8 yd

C = π x d
C = 3.14 x 0.8 yd
C = 2.51 yd

math Antics Worksheets

Name: _____

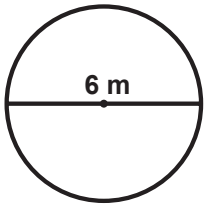
Date: _____

Calculating Area

G-CCA 3

Instructions: Use the formula you learned in the video to calculate the area of each circle below. Use PI = 3.14 and round your answers to two decimal places. You can use a calculator.
(Note: Sometimes the problem gives you the radius, but sometimes it gives you the diameter.)

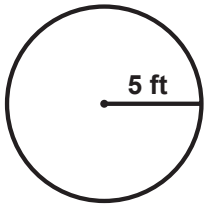
1



$A = \pi \times r^2$
$A = 3.14 \times (3 \times 3)$
$A = 28.26\ m^2$

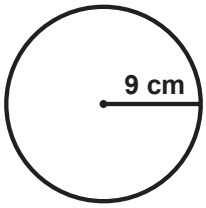
$r = \frac{6}{2} = 3\ m$

2



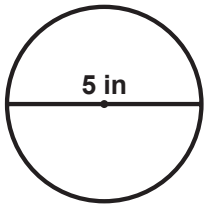
$A = \pi \times r^2$
$A = 3.14 \times (5 \times 5)$
$A = 78.5\ ft^2$

3



$A = \pi \times r^2$
$A = 3.14 \times (9 \times 9)$
$A = 254.34\ cm^2$

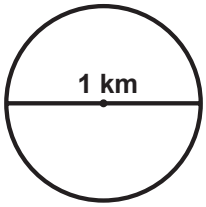
4



$A = \pi \times r^2$
$A = 3.14 \times (2.5)^2$
$A = 19.63\ in^2$

$r = \frac{5}{2} = 2.5\ in$

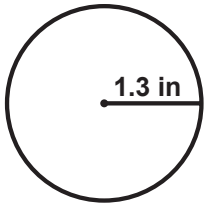
5



$A = \pi \times r^2$
$A = 3.14 \times (0.5)^2$
$A = 0.79\ km^2$

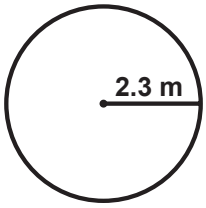
$r = \frac{1}{2} = 0.5\ km$

6



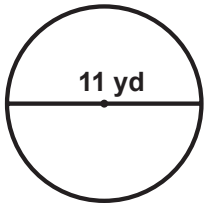
$A = \pi \times r^2$
$A = 3.14 \times (1.3)^2$
$A = 5.31\ in^2$

7



$A = \pi \times r^2$
$A = 3.14 \times (2.3)^2$
$A = 16.61\ m^2$

8



$A = \pi \times r^2$
$A = 3.14 \times (5.5)^2$
$A = 94.99\ yd^2$

$r = \frac{11}{2} = 5.5\ yd$

math Antics Worksheets

Name:

Date:

Calculating Circumference and Area

G-CCA 4

Instructions: For the following problems, use PI = 3.14 You may use a calculator. If necessary, round your answers to two decimal places.

1 A circle has a radius of 1.5 meters. Find its circumference and area.

$d = 1.5 \times 2 = 3$ m

$C = \pi \times d$

$C = 3.14 \times 3 =$ 9.42 m

$A = \pi \times r^2$

$A = 3.14 \times (1.5 \times 1.5) =$ $7.07\ m^2$

2 A circle has a diameter of 26 feet. Find its circumference and area.

$r = 26 \div 2 = 13$ ft

$C = \pi \times d$

$C = 3.14 \times 26 =$ 81.64 ft

$A = \pi \times r^2$

$A = 3.14 \times (13 \times 13) =$ $530.66\ ft^2$

3 A circle has a diameter of 40 miles. Find its circumference and area.

$r = 40 \div 2 = 20$ mi

$C = \pi \times d$

$C = 3.14 \times 40 =$ 125.6 mi

$A = \pi \times r^2$

$A = 3.14 \times (20 \times 20) =$ $1{,}256\ mi^2$

4 A circle has a radius of 3.5 centimeters. Find its circumference and area.

$d = 3.5 \times 2 = 7$ cm

$C = \pi \times d$

$C = 3.14 \times 7 =$ 21.98 cm

$A = \pi \times r^2$

$A = 3.14 \times (3.5 \times 3.5) =$ $38.47\ cm^2$

5 A circle has a diameter of 16 inches. Find its circumference and area.

$r = 16 \div 2 = 8$ in

$C = \pi \times d$

$C = 3.14 \times 16 =$ 50.24 in

$A = \pi \times r^2$

$A = 3.14 \times (8 \times 8) =$ $200.96\ in^2$

6 A circle has a radius of 0.3 meters. Find its circumference and area.

$d = 0.3 \times 2 = 0.6$ m

$C = \pi \times d$

$C = 3.14 \times 0.6 =$ 1.88 m

$A = \pi \times r^2$

$A = 3.14 \times (0.3 \times 0.3) =$ $0.28\ m^2$

math Antics Worksheets

Name: _____

Date: _____

Circumference and Area - Word Problems

G-CCA 5

Instructions: For the following problems, use PI = 3.14. You may use a calculator. If necessary, round your answers to two decimal places.

1 A bicycle tire has a radius of 14 inches. What is the circumference of the tire?

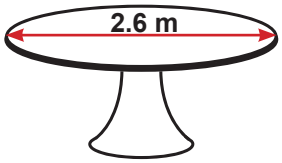
d =14 x 2 = 28 in

$C = \pi \times d$

$C = 3.14 \times 28$ in

$C = 87.92$ in

2 A round table top has a diameter of 2.6 meters. What is its surface area?



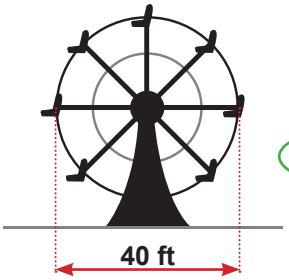
$r = \frac{2.6}{2} = 1.3$ m

$A = \pi \times r^2$

$A = 3.14 \times (1.3)^2$

$A = 5.31$ m^2

3 A Ferris-Wheel at an amusement park has a diameter of 40 feet. How far would you travel in one revolution? (In other words, find the circumference.)

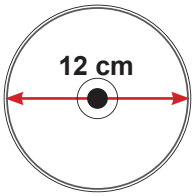


$C = \pi \times d$

$C = 3.14 \times 40$ ft

$C = 125.6$ ft

4 A DVD disc has a diameter of 12 centimeters. What is the surface area of one side of the disc?



$r = \frac{12}{2} = 6$ cm

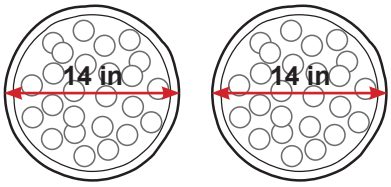
$A = \pi \times r^2$

$A = 3.14 \times (6 \times 6)$

$A = 113.04$ cm^2

5 Which has the greatest surface area: two pizzas that have 14 inch diameters or one pizza that has a 20 inch diameter?

$r = \frac{14}{2} = 7$ in

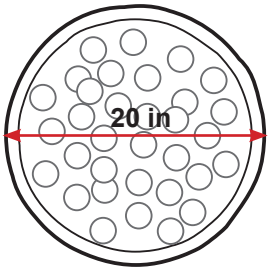


$A = \pi \times r^2$

$A = 3.14 \times (7 \times 7)$

$A = 153.86$ in^2

$2 \times A = 307.72$ in^2



$r = \frac{20}{2} = 10$ in

$A = \pi \times r^2$

$A = 3.14 \times (10 \times 10)$

$A = 314$ in^2

The 20 inch diameter pizza has a little more surface area than the two 14 inch diameter pizzas combined.

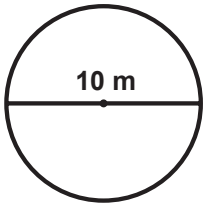
math Antics
Exercises

Name:

Date:

Circles: Circumference & Area

1 Estimate the circumference of this circle by using a rounded-off value of 3 for PI.



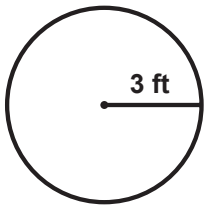
$C = \pi \times d$

$C = \pi \times 10\ m$

$C = 3 \times 10\ m$

$C = 30\ m$

2 Estimate the area of this circle by using a rounded-off value of 3 for PI.



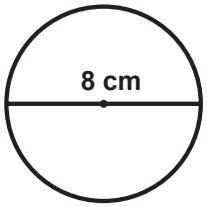
$A = \pi \times r^2$

$A = \pi \times (3ft \times 3ft)$

$A = 3 \times 9\ ft^2$

$A = 27\ ft^2$

3 Calculate the circumference of this circle using the more accurate value of PI = 3.14



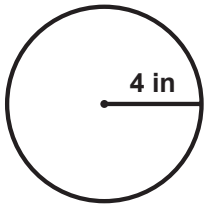
$C = \pi \times d$

$C = \pi \times 8\ cm$

$C = 3.14 \times 8\ cm$

$C = 25.12\ cm$

4 Calculate the area of this circle using the more accurate value of PI = 3.14



$A = \pi \times r^2$

$A = \pi \times (4 \times 4)$

$A = 3.14 \times 16\ in^2$

$A = 50.24\ in^2$

5 If the radius of a circle is 2.5 meters, what is its circumference?

$d = 2 \times r$

$d = 2 \times 2.5\ m$

$d = 5\ m$

$C = \pi \times d$

$C = \pi \times 5\ m$

$C = 3.14 \times 5\ m$

$C = 15.7\ m$

6 If the diameter of a circle is 22 inches, what is its area?

$r = d \div 2$

$r = 22 \div 2$

$r = 11\ in$

$A = \pi \times r^2$

$A = \pi \times (11 \times 11)$

$A = 3.14 \times 121\ in^2$

$A = 379.94\ in^2$

7 A circle has a radius of 1.2 meters. Find its circumference and area. (Round answers to the nearest tenth)

$d = 2.4\ m$

$C = \pi \times d$

$C = 3.14 \times 2.4 = 7.5\ m$

$A = \pi \times r^2$

$A = 3.14 \times (1.2 \times 1.2) = 4.5\ m^2$

8 A circle has a diameter of 15 feet. Find its circumference and area. (Round answers to the nearest tenth)

$r = 7.5\ ft$

$C = \pi \times d$

$C = 3.14 \times 15 = 47.1\ ft$

$A = \pi \times r^2$

$A = 3.14 \times (7.5 \times 7.5) = 176.6\ ft^2$

See Video for step-by-step solutions to each problem.

math Antics Worksheets

Name:

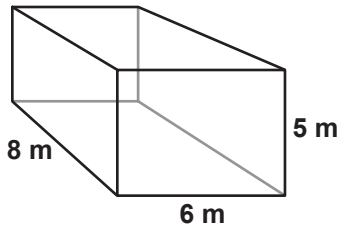
Date:

Finding the Volume of Rectangular Prisms

G-VOL 1

Instructions: Find the volume of each rectangular prism by multiplying the area of the 'base' times the length the base has been extended. (Don't forget about the units!)

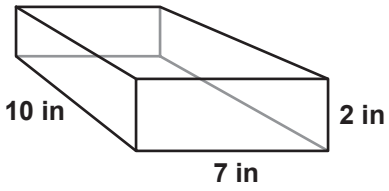
1



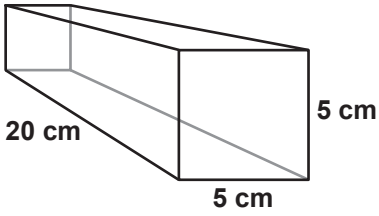
Area of Base = 5 × 6 = 30 m^2

Volume = 30 m^2 × 8 m = 240 m^3

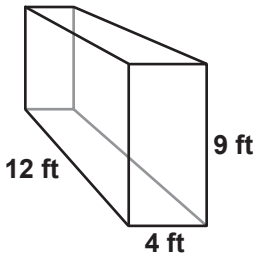
2



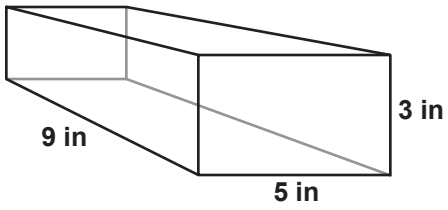
3



4



5



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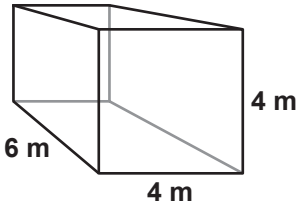


math Antics Worksheets

Name: _____

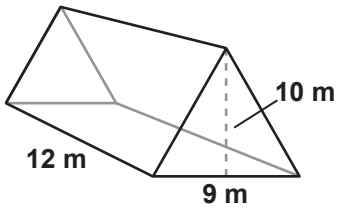
Date: _____

Finding the Volume of Triangular Prisms

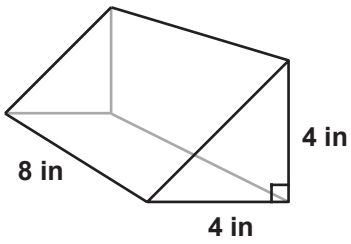
G-VOL 2

Instructions: Find the volume of each triangular prism by multiplying the area of the 'base' times the length the base has been extended. (Don't forget about the units!)

1



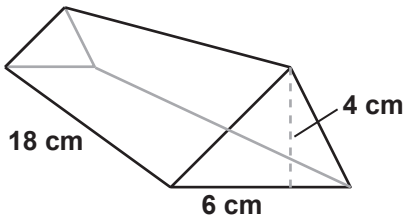
2



$\text{Area}_{\text{of Base}} = \frac{1}{2}(9 \times 10) = \frac{90}{2} = 45 \text{ m}^2$

$\text{Volume} = 45 \text{ m}^2 \times 12 \text{ m} = 540 \text{ m}^3$

3



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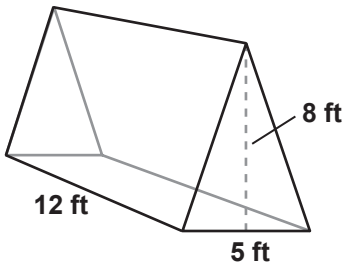

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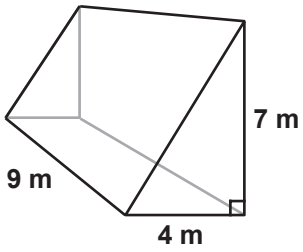

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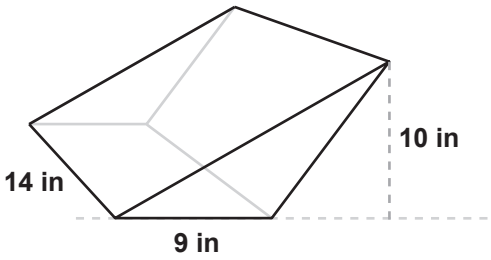


math Antics Worksheets

Name:

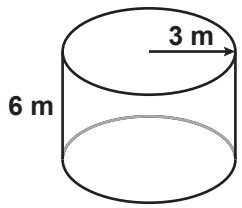
Date:

Finding the Volume of Cylinders

G-VOL 3

Instructions: Find the volume of each cylinder by multiplying the area of the 'base' times the length the base has been extended. (Use 3.14 for Pi and don't forget about the units!)

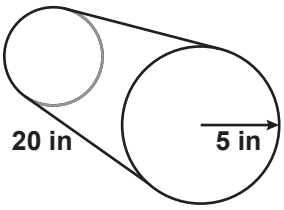
1



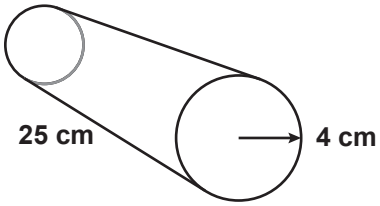
Area of Base $= \pi \times (3\text{ m})^2 = 3.14 \times 9\text{ m}^2$
$= 28.26\text{ m}^2$

$V = 28.26\text{ m}^2 \times 6\text{ m} = 169.56\text{ m}^3$

2



3



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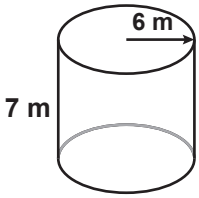

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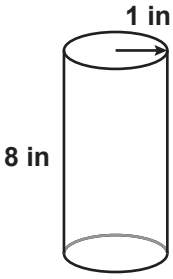

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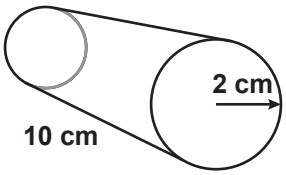


math Antics Worksheets

Name:

Date:

Finding the Volume of Spheres and Cones - Set 1

G-VOL 4

Instructions: Find the volume of each sphere or cone using the formulas given. (Use 3.14 for Pi, round answers to two decimal places, and don't forget about the units!)

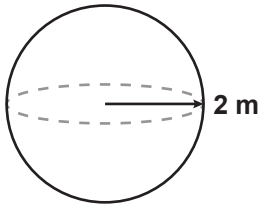
Formula for a Sphere

$$\text{Volume} = \frac{4}{3} \times \pi \times r^3$$

Formula for a Cone

$$\text{Volume} = \frac{1}{3} \times h \times \pi \times r^2$$

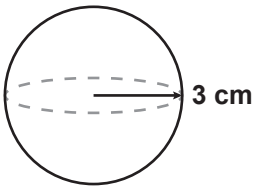
1



$$V = \frac{4}{3} \times 3.14 \times (2 \times 2 \times 2)\ m^3$$

$$= \frac{4 \times 25.12\ m^3}{3} = 33.49\ m^3$$

2



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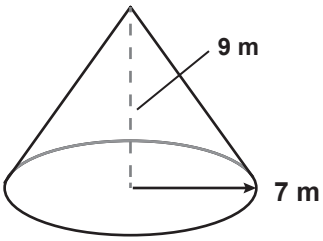
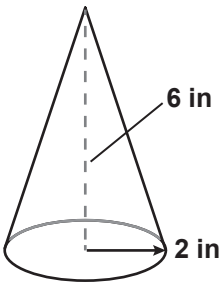


4



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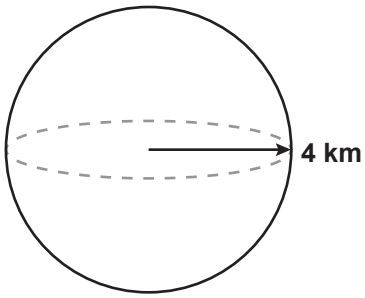


math Antics Worksheets

Name:

Date:

Finding the Volume of Spheres and Cones - Set 2

G-VOL 5

Instructions: Find the volume of each sphere or cone using the formulas given. (Use 3.14 for Pi, round answers to two decimal places, and don't forget about the units!)

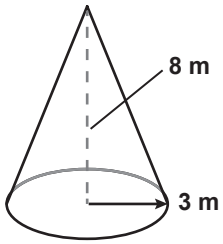
Formula for a Sphere

$$\text{Volume} = \frac{4}{3} \times \pi \times r^3$$

Formula for a Cone

$$\text{Volume} = \frac{1}{3} \times h \times \pi \times r^2$$

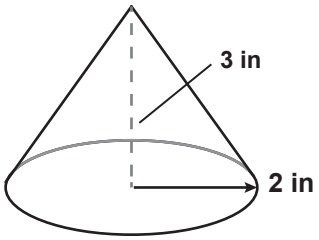
1



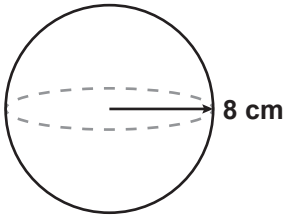
$V = \frac{1}{3} \times 8\text{ m} \times 3.14 \times (3 \times 3)\text{ m}^2$

$= 2.67\text{ m} \times 28.26\text{ m}^2 =$ 75.45 m^3

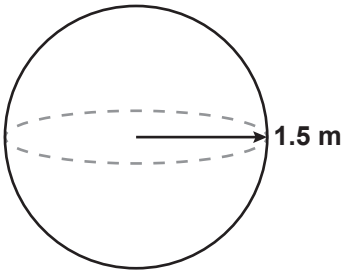
2



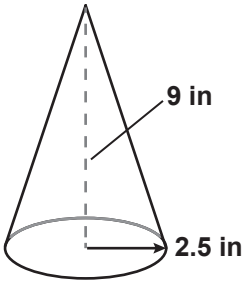
3



4



5



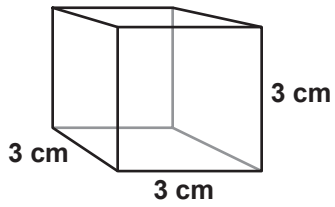
math Antics
Exercises

Name:

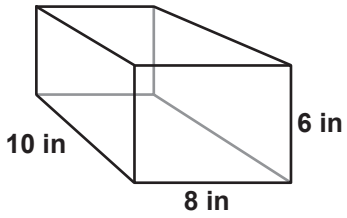
Date:

Volume

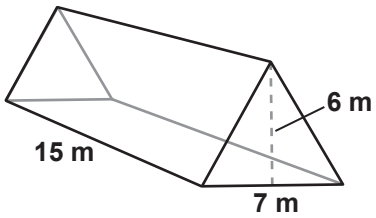
1 Find the volume of this cube.



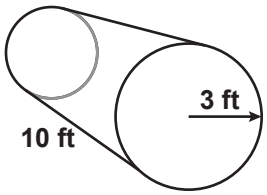
2 Find the volume of this rectangular prism.



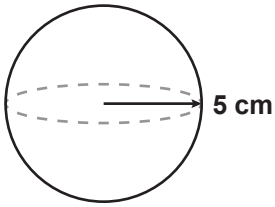
3 Find the volume of this triangular prism.



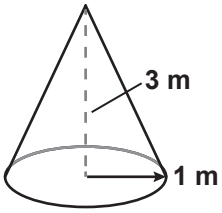
4 Find the volume of this cylinder.



5 Find the volume of this sphere.



6 Find the volume of this cone.



math Antics Worksheets

Name: _____

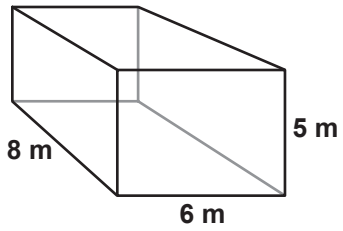
Date: _____

Finding the Volume of Rectangular Prisms

G-VOL 1

Instructions: Find the volume of each rectangular prism by multiplying the area of the 'base' times the length the base has been extended. (Don't forget about the units!)

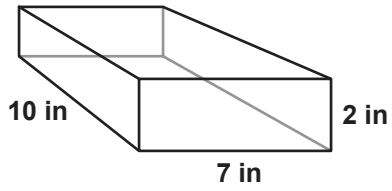
1



Area of Base = $5 \times 6 = 30\ m^2$

Volume = $30\ m^2 \times 8\ m = 240\ m^3$

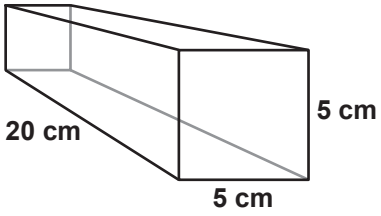
2



Area of Base = $2 \times 7 = 14\ in^2$

Volume = $14\ in^2 \times 10\ in = 140\ in^3$

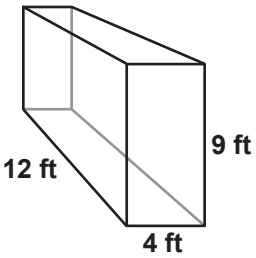
3



Area of Base = $5 \times 5 = 25\ cm^2$

Volume = $25\ cm^2 \times 20\ cm = 500\ cm^3$

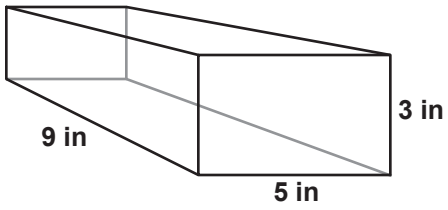
4



Area of Base = $9 \times 4 = 36\ ft^2$

Volume = $36\ ft^2 \times 12\ ft = 432\ ft^3$

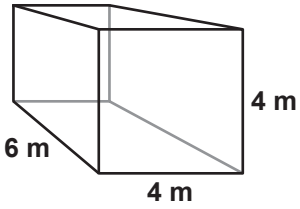
5



Area of Base = $3 \times 5 = 15\ in^2$

Volume = $15\ in^2 \times 9\ in = 135\ in^3$

6



Area of Base = $4 \times 4 = 16\ m^2$

Volume = $16\ m^2 \times 6\ m = 96\ m^3$

math Antics Worksheets

Name: _____

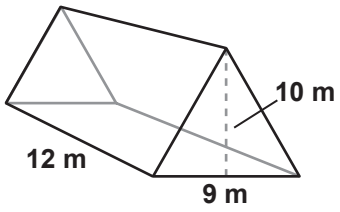
Date: _____

Finding the Volume of Triangular Prisms

G-VOL 2

Instructions: Find the volume of each triangular prism by multiplying the area of the 'base' times the length the base has been extended. (Don't forget about the units!)

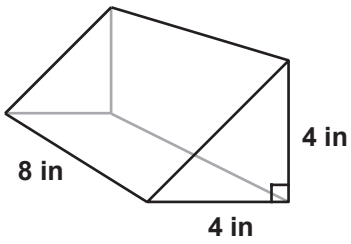
1



$\text{Area}_{\text{of Base}} = \frac{1}{2}(9 \times 10) = \frac{90}{2} = 45\ m^2$

Volume = $45\ m^2 \times 12\ m = 540\ m^3$

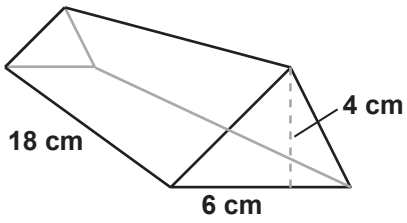
2



$\text{Area}_{\text{of Base}} = \frac{1}{2}(4 \times 4) = \frac{16}{2} = 8\ in^2$

Volume = $8\ in^2 \times 8\ in = 64\ in^3$

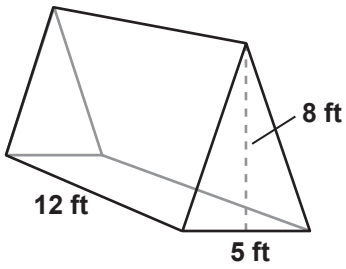
3



$\text{Area}_{\text{of Base}} = \frac{1}{2}(6 \times 4) = \frac{24}{2} = 12\ cm^2$

Volume = $12\ cm^2 \times 18\ cm = 216\ cm^3$

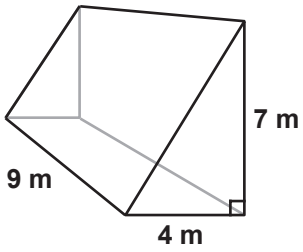
4



$\text{Area}_{\text{of Base}} = \frac{1}{2}(5 \times 8) = \frac{40}{2} = 20\ ft^2$

Volume = $20\ ft^2 \times 12\ ft = 240\ ft^3$

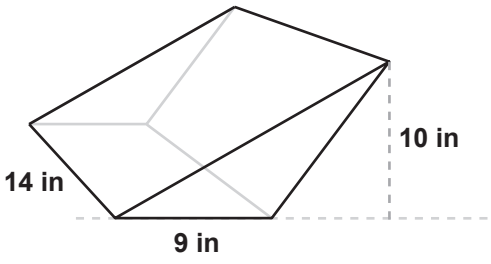
5



$\text{Area}_{\text{of Base}} = \frac{1}{2}(4 \times 7) = \frac{28}{2} = 14\ m^2$

Volume = $14\ m^2 \times 9\ m = 126\ m^3$

6



$\text{Area}_{\text{of Base}} = \frac{1}{2}(9 \times 10) = \frac{90}{2} = 45\ in^2$

Volume = $45\ in^2 \times 14\ in = 630\ in^3$

math Antics Worksheets

Name: _____

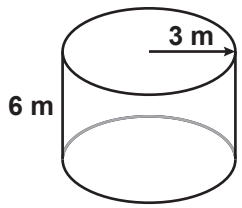
Date: _____

Finding the Volume of Cylinders

G-VOL 3

Instructions: Find the volume of each cylinder by multiplying the area of the 'base' times the length the base has been extended. (Use 3.14 for Pi and don't forget about the units!)

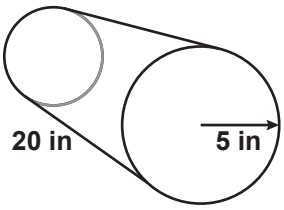
1



Area of Base $= \pi \times (3\text{ m})^2 = 3.14 \times 9\text{ m}^2 = 28.26\text{ m}^2$

$V = 28.26\text{ m}^2 \times 6\text{ m} = 169.56\text{ m}^3$

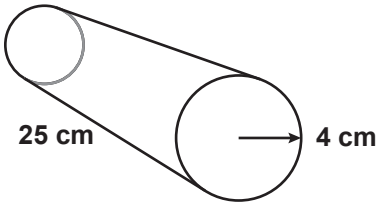
2



Area of Base $= \pi \times (5\text{ in})^2 = 3.14 \times 25\text{ in}^2 = 78.5\text{ in}^2$

$V = 78.5\text{ in}^2 \times 20\text{ in} = 1{,}570\text{ in}^3$

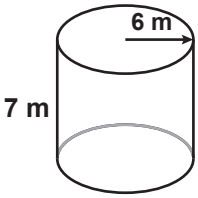
3



Area of Base $= \pi \times (4\text{ cm})^2 = 3.14 \times 16\text{ cm}^2 = 50.24\text{ cm}^2$

$V = 50.24\text{ cm}^2 \times 25\text{ cm} = 1{,}256\text{ cm}^3$

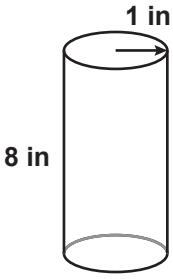
4



Area of Base $= \pi \times (6\text{ m})^2 = 3.14 \times 36\text{ m}^2 = 113.04\text{ m}^2$

$V = 113.04\text{ m}^2 \times 7\text{ m} = 791.28\text{ m}^3$

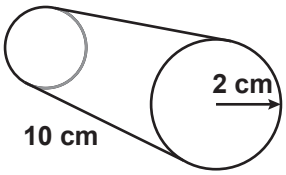
5



Area of Base $= \pi \times (1\text{ in})^2 = 3.14 \times 1\text{ in}^2 = 3.14\text{ in}^2$

$V = 3.14\text{ in}^2 \times 8\text{ in} = 25.12\text{ in}^3$

6



Area of Base $= \pi \times (2\text{ cm})^2 = 3.14 \times 4\text{ cm}^2 = 12.56\text{ cm}^2$

$V = 12.56\text{ cm}^2 \times 10\text{ cm} = 125.6\text{ cm}^3$

math Antics Worksheets

Name:

Date:

Finding the Volume of Spheres and Cones - Set 1

G-VOL 4

Instructions: Find the volume of each sphere or cone using the formulas given. (Use 3.14 for Pi, round answers to two decimal places, and don't forget about the units!)

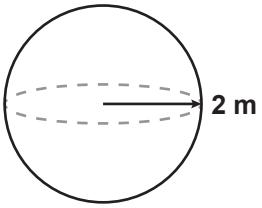
Formula for a Sphere

$$\text{Volume} = \frac{4}{3} \times \pi \times r^3$$

Formula for a Cone

$$\text{Volume} = \frac{1}{3} \times h \times \pi \times r^2$$

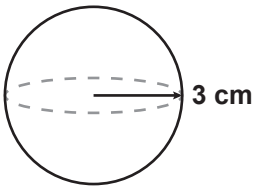
1



$V = \frac{4}{3} \times 3.14 \times (2 \times 2 \times 2)\ m^3$

$= \frac{4 \times 25.12\ m^3}{3} = 33.49\ m^3$

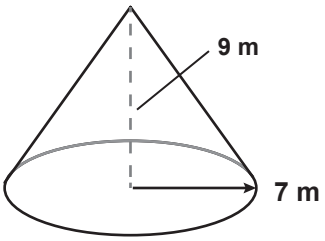
2



$V = \frac{4}{3} \times 3.14 \times (3 \times 3 \times 3)\ cm^3$

$= \frac{4 \times 84.78\ cm^3}{3} = 113.04\ cm^3$

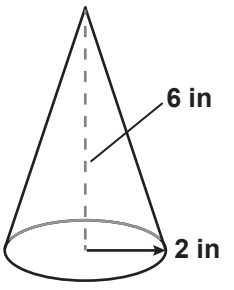
3



$V = \frac{1}{3} \times 9\ m \times 3.14 \times (7 \times 7)\ m^2$

$= 3\ m \times 153.86\ m^2 = 461.58\ m^3$

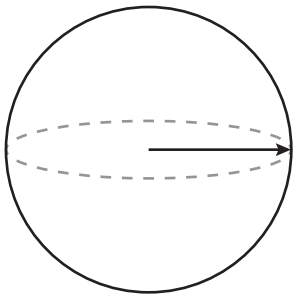
4



$V = \frac{1}{3} \times 6\ in \times 3.14 \times (2 \times 2)\ in^2$

$= 2\ in \times 12.56\ in^2 = 25.12\ in^3$

5



$V = \frac{4}{3} \times 3.14 \times (4 \times 4 \times 4)\ km^3$

$= \frac{4 \times 200.96\ km^3}{3} = 267.95\ km^3$

math Antics Worksheets

Name:

Date:

Finding the Volume of Spheres and Cones - Set 2

G-VOL 5

Instructions: Find the volume of each sphere or cone using the formulas given. (Use 3.14 for Pi, round answers to two decimal places, and don't forget about the units!)

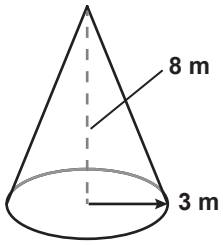
Formula for a Sphere

$$\text{Volume} = \frac{4}{3} \times \pi \times r^3$$

Formula for a Cone

$$\text{Volume} = \frac{1}{3} \times h \times \pi \times r^2$$

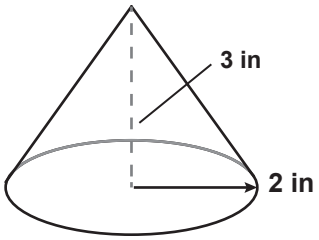
1



$V = \frac{1}{3} \times 8\text{ m} \times 3.14 \times (3 \times 3)\text{ m}^2$

$= 2.67\text{ m} \times 28.26\text{ m}^2 =$ 75.45 m^3

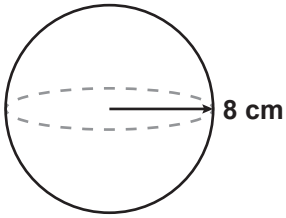
2



$V = \frac{1}{3} \times 3\text{ in} \times 3.14 \times (2 \times 2)\text{ in}^2$

$= 1\text{ in} \times 12.56\text{ in}^2 =$ 12.56 in^3

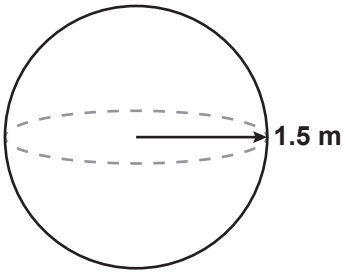
3



$V = \frac{4}{3} \times 3.14 \times (8 \times 8 \times 8)\text{ cm}^3$

$= \frac{4 \times 1607.68\text{ cm}^3}{3} =$ 2,143.57 cm^3

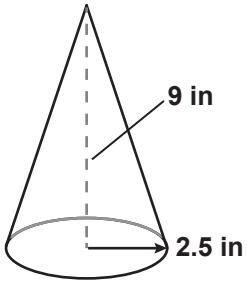
4



$V = \frac{4}{3} \times 3.14 \times (1.5 \times 1.5 \times 1.5)\text{ m}^3$

$= \frac{4 \times 10.598\text{ m}^3}{3} =$ 14.13 m^3

5



$V = \frac{1}{3} \times 9\text{ in} \times 3.14 \times (2.5 \times 2.5)\text{ in}^2$

$= 3\text{ in} \times 19.625\text{ in}^2 =$ 58.88 in^3

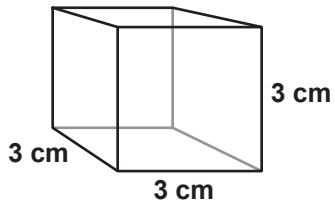
math Antics
Exercises

Name:

Date:

Volume

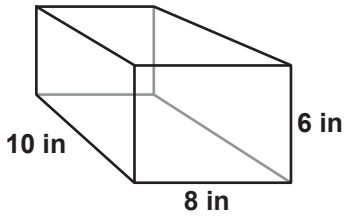
1 Find the volume of this cube.



Area of Base $= 3 \times 3 = 9 \text{ cm}^2$

Volume $= 9 \text{ cm}^2 \times 3 \text{ cm} = \boxed{27 \text{ cm}^3}$

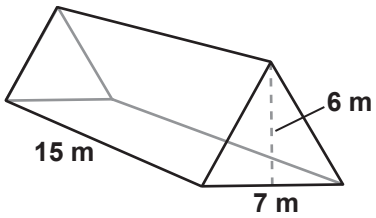
2 Find the volume of this rectangular prism.



Area of Base $= 6 \times 8 = 48 \text{ in}^2$

Volume $= 48 \text{ in}^2 \times 10 \text{ in} = \boxed{480 \text{ in}^3}$

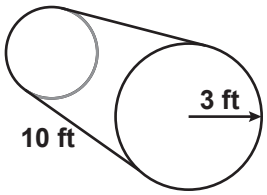
3 Find the volume of this triangular prism.



Area of Base $= \frac{1}{2}(6 \times 7) = \frac{42}{2} = 21 \text{ m}^2$

Volume $= 21 \text{ m}^2 \times 15 \text{ m} = \boxed{315 \text{ m}^3}$

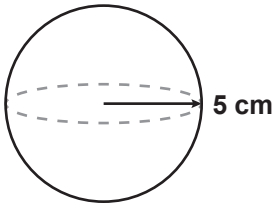
4 Find the volume of this cylinder.



Area of Base $= \pi \times (3 \text{ ft})^2 = 3.14 \times 9 \text{ ft}^2$
$= 28.26 \text{ ft}^2$

Volume $= 28.26 \text{ ft}^2 \times 10 \text{ ft}$
$= \boxed{282.6 \text{ ft}^3}$

5 Find the volume of this sphere.

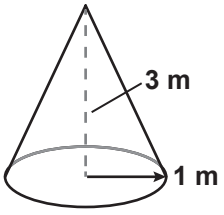


Volume $= \frac{4}{3} \times \pi \times r^3$

$= \frac{4}{3} \times 3.14 \times (5 \times 5 \times 5) \text{ cm}^3$

$= \frac{4 \times 392.5}{3} = \boxed{523.33 \text{ cm}^3}$

6 Find the volume of this cone.



Volume $= \frac{1}{3} \times h \times \pi \times r^2$

$= \frac{1}{3} \times 3\text{m} \times 3.14 \times (1 \times 1) \text{ m}^2$

$= 1 \text{ m} \times 3.14 \text{ m}^2 = \boxed{3.14 \text{ m}^3}$

See Video for step-by-step solutions to each problem.

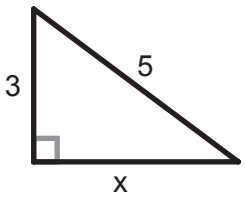
math Antics
Exercises

Name:

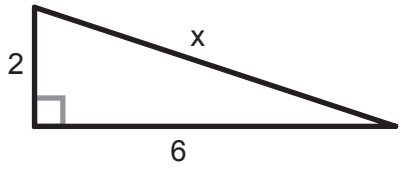
Date:

The Pythagorean Theorem

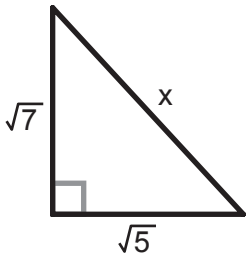
1 Find the length of the unknown side ‘x’.



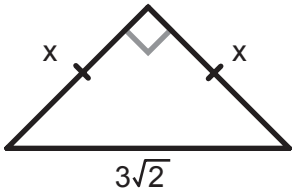
2 Find the length of the unknown side ‘x’.



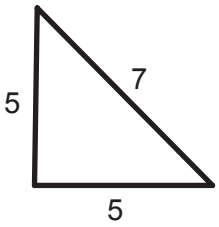
3 Find the length of the unknown side ‘x’.



4 Find the length of the unknown side ‘x’.



5 Is this a RIGHT triangle?



6 If the longest side of a triangle is 10 meters, and the other two sides are 6 and 8 meters long, is it a RIGHT triangle?

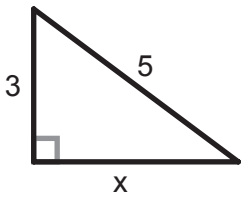
math Antics
Exercises

Name: _____

Date: _____

The Pythagorean Theorem

1 Find the length of the unknown side 'x'.



$3^2 + x^2 = 5^2$

$9 + x^2 = 25$

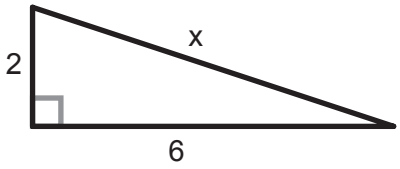
$-9 \quad -9$

$x^2 = 16$

$\sqrt{x^2} = \sqrt{16}$

$x = 4$

2 Find the length of the unknown side 'x'.



$2^2 + 6^2 = x^2$

$4 + 36 = x^2$

$40 = x^2$

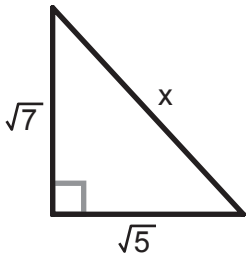
$\sqrt{x^2} = \sqrt{40}$

$x = \sqrt{40}$

or $2\sqrt{10}$

or 6.32...

3 Find the length of the unknown side 'x'.



$\sqrt{7}^2 + \sqrt{5}^2 = x^2$

$7 + 5 = x^2$

$12 = x^2$

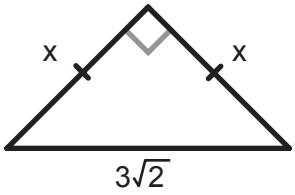
$\sqrt{x^2} = \sqrt{12}$

$x = \sqrt{12}$

or $2\sqrt{3}$

or 3.46...

4 Find the length of the unknown side 'x'.



$x^2 + x^2 = (3\sqrt{2})^2$

$2x^2 = (9 \cdot 2)$

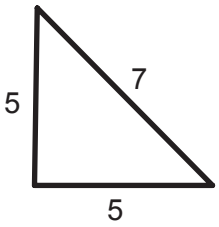
$\frac{2x^2}{2} = \frac{18}{2}$

$x^2 = 9$

$\sqrt{x^2} = \sqrt{9}$

$x = 3$

5 Is this a RIGHT triangle?



Check: $5^2 + 5^2 \stackrel{?}{=} 7^2$

$25 + 25 \stackrel{?}{=} 49$

$50 \neq 49$ No

6 If the longest side of a triangle is 10 meters, and the other two sides are 6 and 8 meters long, is it a RIGHT triangle?

Check: $6^2 + 8^2 \stackrel{?}{=} 10^2$

$36 + 64 \stackrel{?}{=} 100$

$100 = 100$ Yes

See Video for step-by-step solutions to each problem.

math Antics Worksheets

Name:

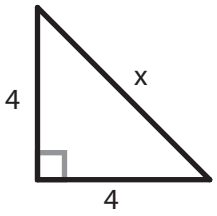
Date:

Finding an Unknown Side - Set 1

G-PT 1

Instructions: For each right triangle, use the Pythagorean Theorem to find the length of the unknown side 'x'. (You can use a calcuator for the arithmetic if you want to.)

1



$4^2 + 4^2 = x^2$

$16 + 16 = x^2$

$32 = x^2$

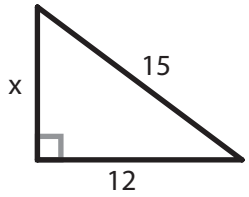
$\sqrt{x^2} = \sqrt{32}$

$x = \sqrt{32}$

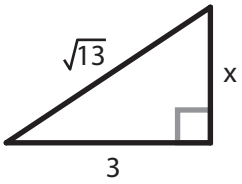
or $4\sqrt{2}$

or 5.656...

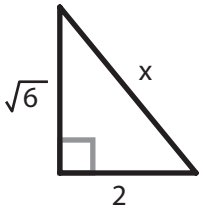
2



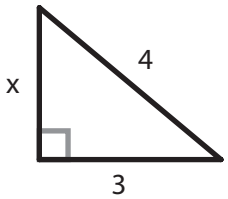
3



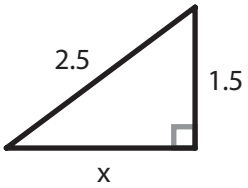
4



5



6



math Antics Worksheets

Name:

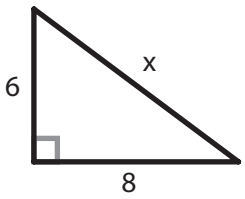
Date:

Finding an Unknown Side - Set 2

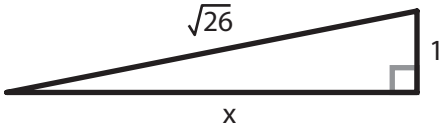
G-PT 2

Instructions: For each right triangle, use the Pythagorean Theorem to find the length of the unknown side 'x'. (You can use a calcuator for the arithmetic if you want to.)

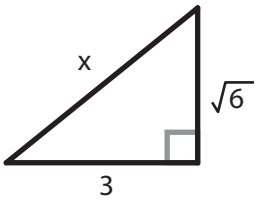
1



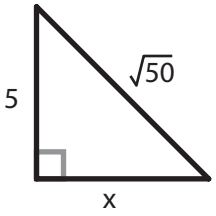
2



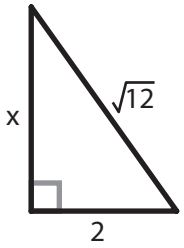
3



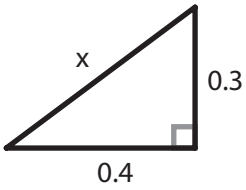
4



5



6



math Antics Worksheets

Name:

Date:

Is it a *right* triangle?

G-PT 3

Instructions: Use the Pythagorean Theorem to test the triangles shown or described in each problem below.

1 If a triangle has sides that are 12, 10 and 6 meters long, is it a right triangle?

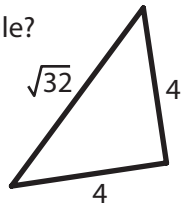
NOTE: when plugging the three sides into the test equation, always make the longest side 'c'.

Test: $6^2 + 10^2 \stackrel{?}{=} 12^2$

$36 + 100 \stackrel{?}{=} 144$

$136 \neq 144$ Nope!

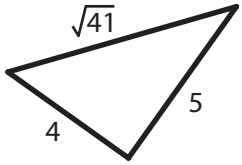
2 Is this a right triangle?



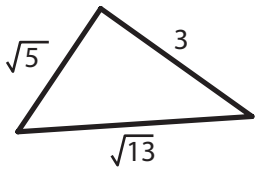
3 Is a triangle with side lengths of 4, 5, and 6 inches a right triangle?

4 A triangle has side lengths that are 7 cm, 7 cm and 11cm. Is it a right triangle ?

5 Is this a right triangle?



6 Is this a right triangle?



math Antics Worksheets

Name: _____

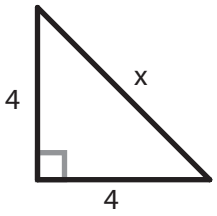
Date: _____

Finding an Unknown Side - Set 1

G-PT 1

Instructions: For each right triangle, use the Pythagorean Theorem to find the length of the unknown side 'x'. (You can use a calcuator for the arithmetic if you want to.)

1



$4^2 + 4^2 = x^2$

$16 + 16 = x^2$

$32 = x^2$

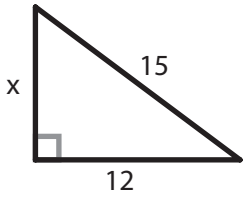
$\sqrt{x^2} = \sqrt{32}$

$x = \sqrt{32}$

or $4\sqrt{2}$

or 5.656...

2



$x^2 + 12^2 = 15^2$

$x^2 + 144 = 225$

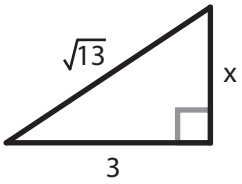
$-144 \quad -144$

$x^2 = 81$

$\sqrt{x^2} = \sqrt{81}$

$x = 9$

3



$x^2 + 3^2 = \sqrt{13}^2$

$x^2 + 9 = 13$

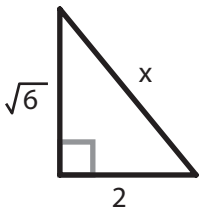
$-9 \quad -9$

$x^2 = 4$

$\sqrt{x^2} = \sqrt{4}$

$x = 2$

4



$\sqrt{6}^2 + 2^2 = x^2$

$6 + 4 = x^2$

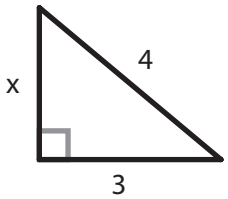
$10 = x^2$

$\sqrt{x^2} = \sqrt{10}$

$x = \sqrt{10}$

or 3.162...

5



$x^2 + 3^2 = 4^2$

$x^2 + 9 = 16$

$-9 \quad -9$

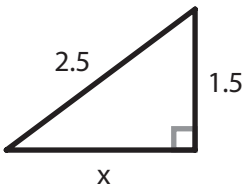
$x^2 = 7$

$\sqrt{x^2} = \sqrt{7}$

$x = \sqrt{7}$

or 2.645...

6



$x^2 + 1.5^2 = 2.5^2$

$x^2 + 2.25 = 6.25$

$-2.25 \quad -2.25$

$x^2 = 4$

$\sqrt{x^2} = \sqrt{4}$

$x = 2$

math Antics Worksheets

Name: _____

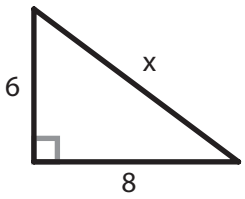
Date: _____

Finding an Unknown Side - Set 2

G-PT 2

Instructions: For each right triangle, use the Pythagorean Theorem to find the length of the unknown side 'x'. (You can use a calcuator for the arithmetic if you want to.)

1



$6^2 + 8^2 = x^2$

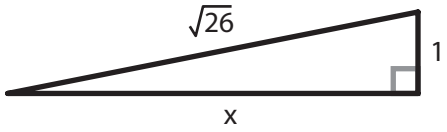
$36 + 64 = x^2$

$100 = x^2$

$\sqrt{x^2} = \sqrt{100}$

$x = 10$

2



$x^2 + 1^2 = \sqrt{26}^2$

$x^2 + 1 = 26$

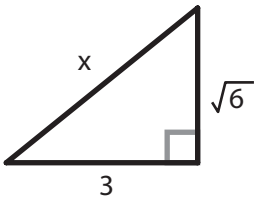
$-1 \quad -1$

$x^2 = 25$

$\sqrt{x^2} = \sqrt{25}$

$x = 5$

3



$\sqrt{6}^2 + 3^2 = x^2$

$6 + 9 = x^2$

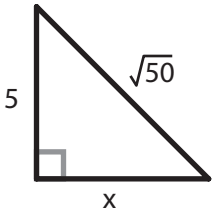
$15 = x^2$

$\sqrt{x^2} = \sqrt{15}$

$x = \sqrt{15}$

or 3.872...

4



$5^2 + x^2 = \sqrt{50}^2$

$25 + x^2 = 50$

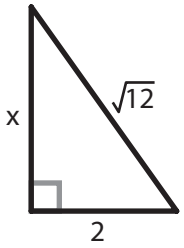
$-25 \quad -25$

$x^2 = 25$

$\sqrt{x^2} = \sqrt{25}$

$x = 5$

5



$x^2 + 2^2 = \sqrt{12}^2$

$x^2 + 4 = 12$

$-4 \quad -4$

$x^2 = 8$

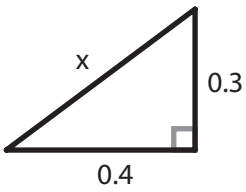
$\sqrt{x^2} = \sqrt{8}$

$x = \sqrt{8}$

or $2\sqrt{2}$

or 2.828...

6



$0.3^2 + 0.4^2 = x^2$

$0.09 + 0.16 = x^2$

$0.25 = x^2$

$\sqrt{x^2} = \sqrt{0.25}$

$x = 0.5$

or $\sqrt{0.25}$

math Antics Worksheets

Name: _____

Date: _____

Is it a *right* triangle?

G-PT 3

Instructions: Use the Pythagorean Theorem to test the triangles shown or described in each problem below.

1 If a triangle has sides that are 12, 10 and 6 meters long, is it a right triangle?

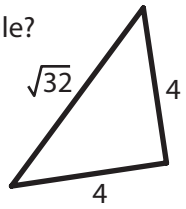
NOTE: when plugging the three sides into the test equation, always make the longest side 'c'.

Test: $6^2 + 10^2 \stackrel{?}{=} 12^2$

$36 + 100 \stackrel{?}{=} 144$

$136 \neq 144$ Nope!

2 Is this a right triangle?



Test: $4^2 + 4^2 \stackrel{?}{=} \sqrt{32}^2$

$16 + 16 \stackrel{?}{=} 32$

$32 = 32$ Yes

3 Is a triangle with side lengths of 4, 5, and 6 inches a right triangle?

Test: $4^2 + 5^2 \stackrel{?}{=} 6^2$

$16 + 25 \stackrel{?}{=} 36$

$41 \neq 36$ No

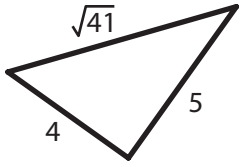
4 A triangle has side lengths that are 7 cm, 7 cm and 11cm. Is it a right triangle ?

Test: $7^2 + 7^2 \stackrel{?}{=} 11^2$

$49 + 49 \stackrel{?}{=} 121$

$98 \neq 121$ No

5 Is this a right triangle?

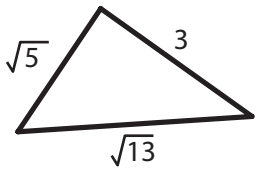


Test: $4^2 + 5^2 \stackrel{?}{=} \sqrt{41}^2$

$16 + 25 \stackrel{?}{=} 41$

$41 = 41$ Yes

6 Is this a right triangle?



Test: $3^2 + \sqrt{5}^2 \stackrel{?}{=} \sqrt{13}^2$

$9 + 5 \stackrel{?}{=} 13$

$14 \neq 13$ No

math Antics Exercises

Name: _____

Date: _____

Intro to the Metric System

1 Answer these questions.

Which metric unit is 10 times bigger than a meter? _____

Which metric unit is 100 times smaller than a meter? _____

2 Answer these questions.

Which metric unit is 1,000 times bigger than a gram? _____

Which metric unit is 1,000 times smaller than a gram? _____

3 List the abbreviations for each metric unit.

Unit	Abbreviation
kilogram	_____
meter	_____
centimeter	_____
milligram	_____
millimeter	_____

4 How many meters are in each of the following units?

kilometer _____

hectometer _____

centimeter _____

millimeter _____

5 Convert this metric unit.

2,500 meters

= _____ dekameters

= _____ hectometers

= _____ kilometers

6 Convert this metric unit.

36.2 kilograms

= _____ hectograms

= _____ dekagrams

= _____ grams

7 Convert this metric unit.

0.71 meters

= _____ decimeters

= _____ centimeters

= _____ millimeters

8 Convert this metric unit.

128 milligrams

= _____ centigrams

= _____ decigrams

= _____ grams

math Antics Exercises

Name: _____

Date: _____

Intro to the Metric System

1 Answer these questions.

Which metric unit is 10 times bigger than a meter? a dekameter

Which metric unit is 100 times smaller than a meter? a centimeter

2 Answer these questions.

Which metric unit is 1,000 times bigger than a gram? a kilogram

Which metric unit is 1,000 times smaller than a gram? a milligram

3 List the abbreviations for each metric unit.

Unit	Abbreviation
kilogram	kg
meter	m
centimeter	cm
milligram	mg
millimeter	mm

4 How many meters are in each of the following units?

kilometer	1,000 m
hectometer	100 m
centimeter	1/100 m
millimeter	1/1,000 m

5 Convert this metric unit.

2,500 meters

= 250 dekameters

= 25 hectometers

= 2.5 kilometers

6 Convert this metric unit.

36.2 kilograms

= 362 hectograms

= 3,620 dekagrams

= 36,200 grams

7 Convert this metric unit.

0.71 meters

= 7.1 decimeters

= 71 centimeters

= 710 millimeters

8 Convert this metric unit.

128 milligrams

= 12.8 centigrams

= 1.28 decigrams

= 0.128 grams

See Video for step-by-step solutions to each problem.

math Antics® Worksheets

Name: _____

Date: _____

Basic Metric Prefixes

G-MS 1

This diagram lists the six metric prefixes that we learned about in the video and shows which power of 10 they correspond to. (There are other prefixes for bigger and smaller amounts, but you don't need to know about them for this lesson.*)

kilo	× 1000
hecto	× 100
deka	× 10
base unit	
deci	÷ 10
centi	÷ 100
milli	÷ 1000

Because these six metric prefixes represent amounts that are bigger or smaller than their immediate neighbors by a factor of 10, they map to the base-10 number places shown below. This diagram can help you understand the relationship between these basic metric units.

***Note:** There are metric units that are larger and smaller than these units, and they are separated by factors of 1,000. But in this lesson, we're only focusing on the six prefixes shown.

math Antics Worksheets

Name: _____

Date: _____

Basic Metric Unit Relationships

G-MS 2

Instructions: Fill in the blanks. (You can use the chart on page 1 to help you)

1. A kilometer is equal to 1,000 meters.
2. A dekameter is equal to _____ meters.
3. A meter is equal to _____ centimeters.
4. A centimeter is equal to _____ millimeters.
5. A meter is equal to _____ millimeters.
6. A hectometer is equal to _____ meters.
7. A meter is equal to _____ decimeters.
8. A kilometer is equal to _____ hectometers.

Instructions: Fill in the blanks. (You can use the chart on page 1 to help you)

1. A millimeter is equal to $\frac{1}{1,000}$ of a meter. or one-thousandth
2. A decimeter is equal to _____ of a meter.
3. A centimeter is equal to _____ of a meter.
4. A meter is equal to _____ of a kilometer.
5. A meter is equal to _____ of a hectometer.
6. A meter is equal to _____ of a dekameter.
7. A millimeter is equal to _____ of a centimeter.
8. A centimeter is equal to _____ of a decimeter.

math Antics Worksheets

Name: _____

Date: _____

Basic Metric Unit Conversions

G-MS 3

Instructions: Multiply or divide by powers of 10 to convert these measurements to the units shown. Use the chart on page 1 to remind yourself of the relationships between metric units. (Note: Because multiplying or dividing by powers of 10 can be thought of as shifting the decimal point, the decimal shift corresponding to the math operation is also shown.)

		math	decimal shift
1	35 meters = 3,500 centimeters	35 × 100 = 3,500	2, right
2	120 milligrams = 0.12 grams	120 ÷ 1,000 = 0.12	3, left
3	15 centimeters = _____ meters		
4	3.4 grams = _____ milligrams		
5	0.5 kilograms = _____ grams		
6	21 centimeter = _____ decimeters		
7	6,800 grams = _____ kilograms		
8	10.4 centimeters = _____ meters		
9	0.03 grams = _____ centigrams		
10	1,375 meters = _____ kilometers		
11	7 meters = _____ kilometers		
12	8.5 milligrams = _____ grams		

math Antics® Worksheets

Name: _____

Date: _____

Basic Metric Prefixes

G-MS 1

This diagram lists the six metric prefixes that we learned about in the video and shows which power of 10 they correspond to. (There are other prefixes for bigger and smaller amounts, but you don't need to know about them for this lesson.*)

kilo	× 1000
hecto	× 100
deka	× 10
base unit	
deci	÷ 10
centi	÷ 100
milli	÷ 1000

Because these six metric prefixes represent amounts that are bigger or smaller than their immediate neighbors by a factor of 10, they map to the base-10 number places shown below. This diagram can help you understand the relationship between these basic metric units.

***Note:** There are metric units that are larger and smaller than these units, and they are separated by factors of 1,000. But in this lesson, we're only focusing on the six prefixes shown.

math Antics Worksheets

Name: _____

Date: _____

Basic Metric Unit Relationships

G-MS 2

Instructions: Fill in the blanks. (You can use the chart on page 1 to help you)

1. A kilometer is equal to 1,000 meters.
2. A dekameter is equal to 10 meters.
3. A meter is equal to 100 centimeters.
4. A centimeter is equal to 10 millimeters.
5. A meter is equal to 1,000 millimeters.
6. A hectometer is equal to 100 meters.
7. A meter is equal to 10 decimeters.
8. A kilometer is equal to 10 hectometers.

Instructions: Fill in the blanks. (You can use the chart on page 1 to help you)

1. A millimeter is equal to $\frac{1}{1,000}$ of a meter. or one-thousandth
2. A decimeter is equal to $\frac{1}{10}$ of a meter. or one-tenth
3. A centimeter is equal to $\frac{1}{100}$ of a meter. or one-hundredth
4. A meter is equal to $\frac{1}{1,000}$ of a kilometer. or one-thousandth
5. A meter is equal to $\frac{1}{100}$ of a hectometer. or one-hundredth
6. A meter is equal to $\frac{1}{10}$ of a dekameter. or one-tenth
7. A millimeter is equal to $\frac{1}{10}$ of a centimeter. or one-tenth
8. A centimeter is equal to $\frac{1}{10}$ of a decimeter. or one-tenth

math Antics Worksheets

Name: _____

Date: _____

Basic Metric Unit Conversions

G-MS 3

Instructions: Multiply or divide by powers of 10 to convert these measurements to the units shown. Use the chart on page 1 to remind yourself of the relationships between metric units. (Note: Because multiplying or dividing by powers of 10 can be thought of as shifting the decimal point, the decimal shift corresponding to the math operation is also shown.)

		math	decimal shift
1	35 meters = 3,500 centimeters	35 × 100 = 3,500	2, right
2	120 milligrams = 0.12 grams	120 ÷ 1,000 = 0.12	3, left
3	15 centimeters = 0.15 meters	15 ÷ 100 = 0.15	2, left
4	3.4 grams = 3,400 milligrams	3.4 × 1,000 = 3,400	3, right
5	0.5 kilograms = 500 grams	0.5 × 1,000 = 500	3, right
6	21 centimeter = 2.1 decimeters	2.1 ÷ 10 = 21	1, left
7	6,800 grams = 6.8 kilograms	6,800 ÷ 1,000 = 6.8	3, left
8	10.4 centimeters = 0.104 meters	10.4 ÷ 100 = 0.104	2, left
9	0.03 grams = 3 centigrams	0.03 × 100 = 3	2, right
10	1,375 meters = 1.375 kilometers	1,375 ÷ 1,000 = 1.375	3, left
11	7 meters = 0.007 kilometers	7 ÷ 1,000 = 0.007	3, left
12	8.5 milligrams = 0.0085 grams	8.5 ÷ 1,000 = 0.0085	3, left

math Antics
Exercises

Name: _____

Date: _____

Units of Distance

1 For each pair of units listed below, circle the longer one:

inch or foot

yard or meter

meter or foot

mile or kilometer

2 For each pair of units listed below, circle the shorter one:

centimeter or inch

yard or foot

millimeter or centimeter

millimeter or inch

3 Fill in the blanks.

1 inch is about _____ centimeters

10 miles is about _____ kilometers

4 Fill in the blanks.

1 foot is exactly _____ inches

1 yard is exactly _____ feet

5 Circle the metric unit that would be the best choice for measuring the diameter of a basketball?

meters millimeters
kilometers centimeters

6 Circle the traditional unit that would be the best choice for measuring the length of a skateboard?

feet inches
miles yards

7 Circle the metric unit that would be the best choice for measuring the length of a swimming pool?

meters millimeters
kilometers centimeters

8 Circle the traditional unit that would be the best choice for measuring the length of the California coastline?

feet inches
miles yards

9 If you drove 40 miles to get to the beach, estimate how many kilometers you went.

10 If your cat is 1.5 feet long from head to tail, estimate how many centimeters long he is.

math Antics Exercises

Name: _____

Date: _____

Units of Distance

1 For each pair of units listed below, circle the longer one:

inch or **foot**

yard or **meter**

meter or foot

mile or kilometer

2 For each pair of units listed below, circle the shorter one:

centimeter or inch

yard or **foot**

millimeter or centimeter

millimeter or inch

3 Fill in the blanks.

1 inch is about 2.5 centimeters

10 miles is about 16 kilometers

4 Fill in the blanks.

1 foot is exactly 12 inches

1 yard is exactly 3 feet

5 Circle the metric unit that would be the best choice for measuring the diameter of a basketball?

meters millimeters

kilometers **centimeters**

6 Circle the traditional unit that would be the best choice for measuring the length of a skateboard?

feet **inches**

miles yards

(feet also a good choice)

7 Circle the metric unit that would be the best choice for measuring the length of a swimming pool?

meters millimeters

kilometers centimeters

8 Circle the traditional unit that would be the best choice for measuring the length of the California coastline?

feet inches

miles yards

9 If you drove 40 miles to get to the beach, estimate how many kilometers you went.

remember: 10 mi ~ 16 km

you went 4 times the distance of 10 miles, so you went 4 x 16 km

$$\begin{array}{r} 16 \\ \times\ 4 \\ \hline 64 \end{array}$$

~ 64 km

10 If your cat is 1.5 feet long from head to tail, estimate how many centimeters long he is.

remember: 1 ft ~ 30 cm

So you cat is 30 cm PLUS half of that.
half of 30 = 15,
Your cat's length is about 30 + 15 = 45

~ 45 cm

See Video for step-by-step solutions to each problem.

math Antics Worksheets

Name: _____

Date: _____

Comparing Common Units of Distance

G-UOD 1

1 Put these common traditional units of distance in order from shortest to longest.

yard inch mile foot

_____ _____ _____ _____

shortest → *longest*

2 Put these common metric units of distance in order from shortest to longest.

kilometer centimeter millimeter meter

_____ _____ _____ _____

shortest → *longest*

3 Which metric unit is closest in length to a yard? _____

4 Is a meter longer than a yard? _____

5 Which metric unit is closest in length to a mile? _____

6 Is a kilometer longer than a mile? _____

7 Approximately how many kilometers are in 10 miles? _____

8 Which is longer, an inch or a centimeter? _____

9 Approximately how many centimeters are in an inch? _____

10 How many inches are in a foot? _____

11 How many feet are in a yard? _____

math Antics Worksheets

Name: _____

Date: _____

Choosing the 'Best' Metric Unit

G-UOD 2

Instructions: For each problem below, decide which common metric unit you think would be best for measuring the object listed. You can write the whole word or just the abbreviation of that unit.

millimeters: mm **centimeters: cm** **meters: m** **kilometers: km**

1. The length of a pencil cm
2. The diameter of a water tower _____
3. The length of a highway _____
4. The width of a fruit fly _____
5. The perimeter of a swimming pool _____
6. The radius of a bicycle tire _____
7. The distance between two cities _____
8. The thickness of a pancake _____
9. The depth of a lake _____
10. The length of a bee's wing _____
11. The height of a building _____
12. The diameter of a cake _____

math Antics Worksheets

Name: _____

Date: _____

Choosing the 'Best' Traditional Unit

G-UOD 3

Instructions: For each problem below, decide which common traditional unit you think would be best for measuring the object listed. You can write the whole word or just the abbreviation of that unit.

inches: in **feet: ft** **yards: yd** **miles: mi**

1. The length of a hot dog ___in___
2. The depth of a swimming pool _____
3. The diameter of a basketball _____
4. The length of a basketball court _____
5. The distance across an ocean _____
6. The width of a bedroom _____
7. The width of an envelope _____
8. The length of playground _____
9. The height of a ladder _____
10. The height of California _____
11. The diameter of a pumpkin _____
12. The length of a boat _____

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Name: _____

Date: _____

Simple Metric Distance Conversions

G-UOD 4

Instructions: To answer the following questions, remember these simple metric relationships you learned in the video lesson.

1 kilometer = 1,000 meters **1 meter = 100 centimeters** **1 centimeter = 10 millimeters**

Hint: *If you are converting from a bigger unit to a smaller one (i.e. km to m) you will need to multiply, but if you are converting from a smaller unit to a bigger one (i.e. cm to m) you will need to divide.*

1 How many meters are equivalent to 2 kilometer?

since: 1 km = 1,000 m
x 2 x 2
then: 2 km = 2,000 m

2 How many centimeters are equivalent to 50 millimeters?

since: 1 cm = 10 mm
we need to divide our 50 mm into groups of 10
50 mm ÷ 10 = 5 cm

3 How many millimeters are equivalent to 8 centimeters?

4 How many kilometers are equivalent to 3,000 meters?

5 How many centimeters are equivalent to 12 meters?

6 How many meters are equivalent to 400 centimeters?

7 How many meters are equivalent to 7 kilometer?

8 How many centimeters are equivalent to 60 millimeters?

9 How many centimeters are equivalent to 2.5 meters?

10 How many kilometers are equivalent to 1,500 meters?

math Antics Worksheets

Name:

Date:

Simple Traditional Distance Conversions

G-UOD 5

Instructions: To answer the following questions, remember these simple traditional distance relationships you learned in the video lesson.

1 mile = 1,760 yards **1 yard = 3 feet** **1 foot = 12 inches**

Hint: *If you are converting from a bigger unit to a smaller one (i.e. ft to in) you will need to multiply, but if you are converting from a smaller unit to a bigger one (i.e. ft to yd) you will need to divide.*

1 How many inches are equivalent to 3 feet?

since: 1 ft = 12 in
x 3 x 3
then: 3 ft = 36 in

2 How many yards are equivalent to 12 feet?

since: 1 yd = 3 ft
we need to divide our 12 ft
by 3 to see how many yards that is
12 ft ÷ 3 = 4 yd

3 How many feet are equivalent to 3 yards?

4 How many feet are equivalent to 24 inches?

5 How many yards are equivalent to 2 miles?

6 How many yards are equivalent to 30 feet?

7 How many inches are equivalent to 4 feet?

8 How many feet are equivalent to 60 inches?

9 How many inches are equivalent to 1.5 feet?

10 How many feet are equivalent to 6 inches?

math Antics Worksheets

Name:

Date:

Estimating Distance Conversions

G-UOD 6

Instructions: To answer the following questions, remember these estimated conversions between metric and traditional units.

10 miles ≈ 16 kilometers **1 foot ≈ 30 centimeters** **1 inch ≈ 2.5 centimeters**

1 A pool is 4 feet deep. Estimate how many centimeters deep it is.

since: 1 ft ≈ 30 cm
×4 ×4
then: 4 ft ≈ 120 cm

2 If you live 100 miles from the nearest big city, approximatly how many kilometers is that?

3 If you have to travel 5 miles to school, about how many kilometers is that?

4 A tray is about 60 centimeters wide. What is its approximate width in feet?

5 If a drinking glass is 8 inches tall, what is its approximate height in centimeters?

6 If your friend is 5 feet tall, estimate their height in centimeters?

7 If the college you want to go to is 30 miles from your home, about how far is that in kilometers?

8 If a candle is 3 inches tall, about how many centimeters is that?

9 If your dog is 2.5 feet long, about how many centimeters long is it?

10 If your friend's hamster is 5 inches tall, about how many centimeters is that?

math Antics Worksheets

Name: _____

Date: _____

Comparing Common Units of Distance

G-UOD 1

1 Put these common traditional units of distance in order from shortest to longest.

yard inch mile foot

inch, foot, yard, mile

shortest → longest

2 Put these common metric units of distance in order from shortest to longest.

kilometer centimeter millimeter meter

millimeter, centimeter, meter, kilometer

shortest → longest

3 Which metric unit is closest in length to a yard? a meter

4 Is a meter longer than a yard? yes

5 Which metric unit is closest in length to a mile? a kilometer

6 Is a kilometer longer than a mile? no

7 Approximately how many kilometers are in 10 miles? 16

8 Which is longer, an inch or a centimeter? an inch

9 Approximately how many centimeters are in an inch? 2.5

10 How many inches are in a foot? 12

11 How many feet are in a yard? 3

math Antics Worksheets

Name: _____

Date: _____

Choosing the 'Best' Metric Unit

G-UOD 2

Instructions: For each problem below, decide which common metric unit you think would be best for measuring the object listed. You can write the whole word or just the abbreviation of that unit.

millimeters: mm **centimeters: cm** **meters: m** **kilometers: km**

1. The length of a pencil — cm
2. The diameter of a water tower — m
3. The length of a highway — km
4. The width of a fruit fly — mm
5. The perimeter of a swimming pool — m
6. The radius of a bicycle tire — cm
7. The distance between two cities — km
8. The thickness of a pancake — mm
9. The depth of a lake — m
10. The length of a bee's wing — mm
11. The height of a building — m
12. The diameter of a cake — cm

math Antics Worksheets

Name:

Date:

Choosing the 'Best' Traditional Unit

G-UOD 3

Instructions: For each problem below, decide which common traditional unit you think would be best for measuring the object listed. You can write the whole word or just the abbreviation of that unit.

inches: in **feet: ft** **yards: yd** **miles: mi**

1. The length of a hot dog — in
2. The depth of a swimming pool — ft
3. The diameter of a basketball — in
4. The length of a basketball court — yd (or ft)
5. The distance across an ocean — mi
6. The width of a bedroom — ft
7. The width of an envelope — in
8. The length of playground — yd (or ft)
9. The height of a ladder — ft
10. The height of California — mi
11. The diameter of a pumpkin — in
12. The length of a boat — ft

math Antics Worksheets

Name:

Date:

Simple Metric Distance Conversions

G-UOD 4

Instructions: To answer the following questions, remember these simple metric relationships you learned in the video lesson.

1 kilometer = 1,000 meters **1 meter = 100 centimeters** **1 centimeter = 10 millimeters**

Hint: *If you are converting from a bigger unit to a smaller one (i.e. km to m) you will need to multiply, but if you are converting from a smaller unit to a bigger one (i.e. cm to m) you will need to divide.*

1 How many meters are equivalent to 2 kilometer?

since: 1 km = 1,000 m
x 2 x 2
then: 2 km = 2,000 m

2 How many centimeters are equivalent to 50 millimeters?

since: 1 cm = 10 mm
we need to divide our 50 mm into groups of 10
50 mm ÷ 10 = 5 cm

3 How many millimeters are equivalent to 8 centimeters?

since: 1 cm = 10 mm
x 8 x 8
then: 8 cm = 80 mm

4 How many kilometers are equivalent to 3,000 meters?

since: 1 km = 1,000 m
3,000 m ÷ 1,000 = 3 km

5 How many centimeters are equivalent to 12 meters?

since: 1 m = 100 cm
x 12 x 12
then: 12 m = 1,200 cm

6 How many meters are equivalent to 400 centimeters?

since: 1 m = 100 cm
400 cm ÷ 100 = 4 m

7 How many meters are equivalent to 7 kilometer?

since: 1 km = 1,000 m
x 7 x 7
then: 7 km = 7,000 m

8 How many centimeters are equivalent to 60 millimeters?

since: 1 cm = 10 mm
60 mm ÷ 10 = 6 cm

9 How many centimeters are equivalent to 2.5 meters?

since: 1 m = 100 cm
x 2.5 x 2.5
then: 2.5 m = 250 cm

10 How many kilometers are equivalent to 1,500 meters?

since: 1 km = 1,000 m
1,500 m ÷ 1,000 = 1.5 km

math Antics Worksheets

Name:

Date:

Simple Traditional Distance Conversions

G-UOD 5

Instructions: To answer the following questions, remember these simple traditional distance relationships you learned in the video lesson.

1 mile = 1,760 yards **1 yard = 3 feet** **1 foot = 12 inches**

Hint: *If you are converting from a bigger unit to a smaller one (i.e. ft to in) you will need to multiply, but if you are converting from a smaller unit to a bigger one (i.e. ft to yd) you will need to divide.*

1 How many inches are equivalent to 3 feet?

since: 1 ft = 12 in
x 3 x 3
then: 3 ft = (36 in)

2 How many yards are equivalent to 12 feet?

since: 1 yd = 3 ft
we need to divide our 12 ft
by 3 to see how many yards that is
12 ft ÷ 3 = (4 yd)

3 How many feet are equivalent to 3 yards?

since: 1 yd = 3 ft
x 3 x 3
then: 3 yd = (9 ft)

4 How many feet are equivalent to 24 inches?

since: 1 ft = 12 in
24 in ÷ 12 = (2 ft)

5 How many yards are equivalent to 2 miles?

since: 1 mi = 1,760 yd
x 2 x 2
then: 2 mi = (3,520 yd)

6 How many yards are equivalent to 30 feet?

since: 1 yd = 3 ft
30 ft ÷ 3 = (10 yd)

7 How many inches are equivalent to 4 feet?

since: 1 ft = 12 in
x 4 x 4
then: 4 ft = (48 in)

8 How many feet are equivalent to 60 inches?

since: 1 ft = 12 in
60 in ÷ 12 = (5 ft)

9 How many inches are equivalent to 1.5 feet?

since: 1 ft = 12 in
x 1.5 x 1.5
then: 1.5 ft = (18 in)

10 How many feet are equivalent to 6 inches?

since: 1 ft = 12 in
6 in ÷ 12 = (0.5 ft) or $\frac{1}{2}$ ft

math Antics Worksheets

Name:

Date:

Estimating Distance Conversions

G-UOD 6

Instructions: To answer the following questions, remember these estimated conversions between metric and traditional units.

10 miles ≈ 16 kilometers **1 foot ≈ 30 centimeters** **1 inch ≈ 2.5 centimeters**

1 A pool is 4 feet deep. Estimate how many centimeters deep it is.

since: 1 ft ≈ 30 cm
x 4 x 4
then: 4 ft ≈ 120 cm

2 If you live 100 miles from the nearest big city, approximatly how many kilometers is that?

since: 10 mi ≈ 16 km
x 10 x 10
then: 100 mi ≈ 160 km

3 If you have to travel 5 miles to school, about how many kilometers is that?

since: 10 mi ≈ 16 km
÷ 2 ÷ 2
then: 5 mi ≈ 8 km

4 A tray is about 60 centimeters wide. What is its approximate width in feet?

since: 1 ft ≈ 30 cm
60 cm ÷ 30 ≈ 2 ft

5 If a drinking glass is 8 inches tall, what is its approximate height in centimeters?

since: 1 in ≈ 2.5 cm
x 8 x 8
then: 8 in ≈ 20 cm

6 If your friend is 5 feet tall, estimate their height in centimeters?

since: 1 ft ≈ 30 cm
x 5 x 5
then: 5 ft ≈ 150 cm

7 If the college you want to go to is 30 miles from your home, about how far is that in kilometers?

since: 10 mi ≈ 16 km
x 3 x 3
then: 30 mi ≈ 48 km

8 If a candle is 3 inches tall, about how many centimeters is that?

since: 1 in ≈ 2.5 cm
x 3 x 3
then: 3 in ≈ 7.5 cm or 8 cm

9 If your dog is 2.5 feet long, about how many centimeters long is it?

since: 1 ft ≈ 30 cm
x 2.5 x 2.5
then: 2.5 ft ≈ 75 cm

10 If your friend's hamster is 5 inches tall, about how many centimeters is that?

since: 1 in ≈ 2.5 cm
x 5 x 5
then: 5 in ≈ 12.5 cm or 13 cm