math Antics Worksheets

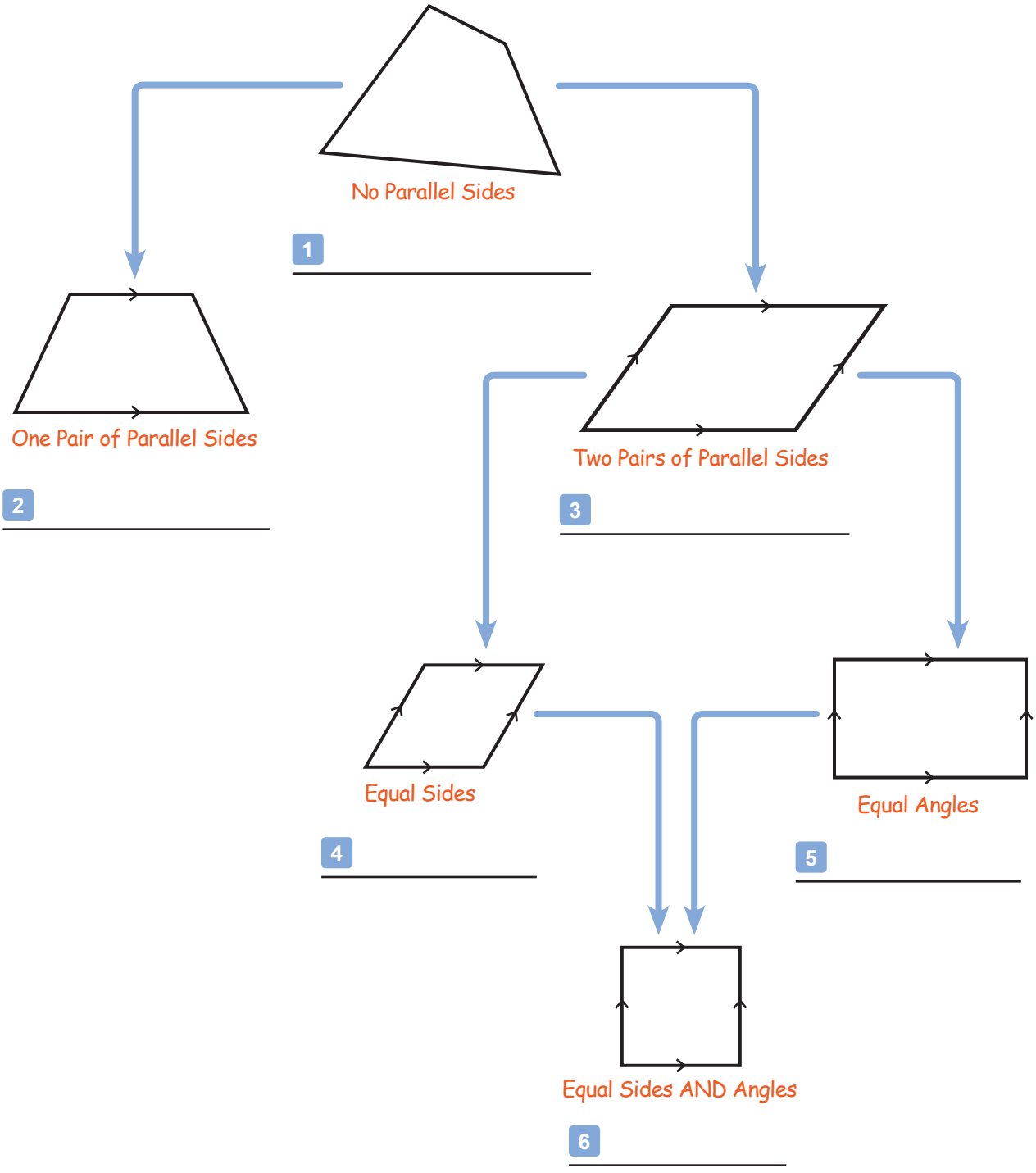
Name:

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.



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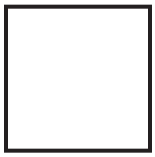
Classifying Quadrilaterals

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.

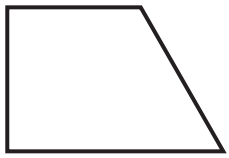
1

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



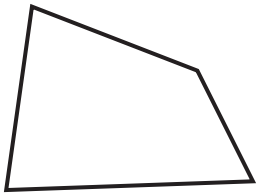
2

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



3

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

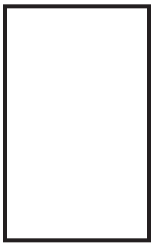


4

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

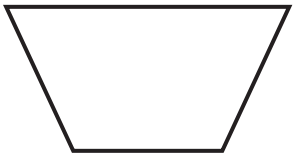
5

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



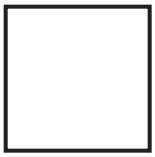
6

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



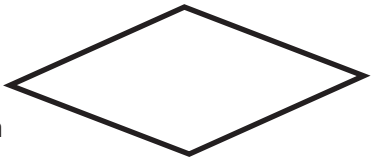
7

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



8

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



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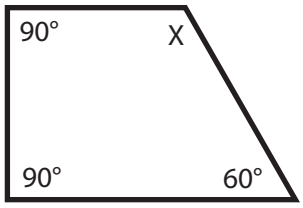
Finding an Unknown Angle

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

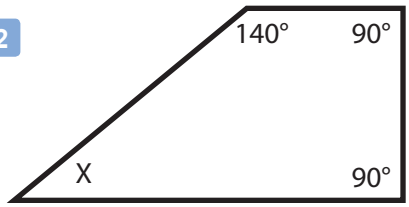


m∠X = 120°

90
90
+ 60
240

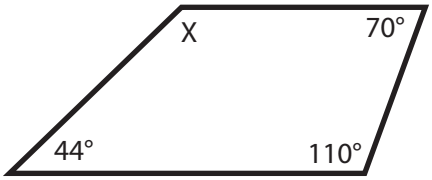
360
- 240
120

2



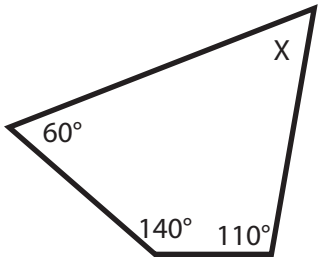
m∠X = _____

3



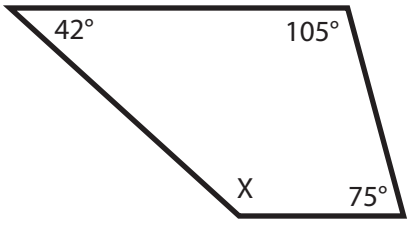
m∠X = _____

4



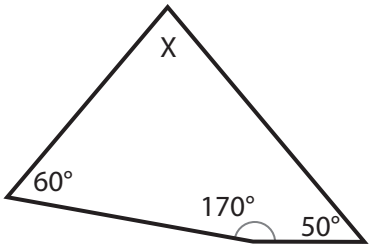
m∠X = _____

5



m∠X = _____

6



m∠X = _____

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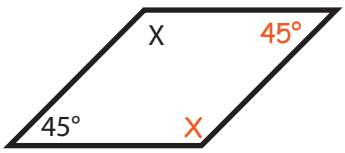
Finding an Unknown Angle in a Parallelogram

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.

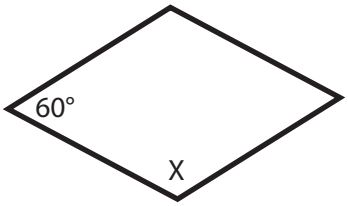
1



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

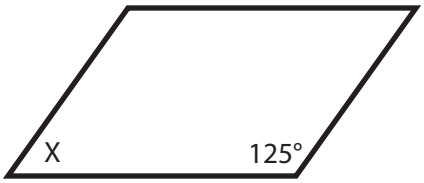


m∠X = _____

3

m∠X = _____

4

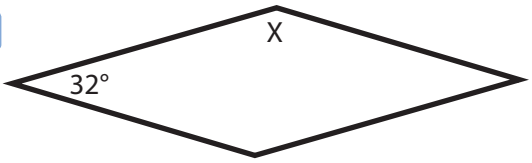


m∠X = _____

5

m∠X = _____

6



m∠X = _____

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Exercises

Name: _____

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Quadrilaterals

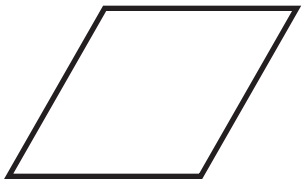
1 What do we call a quadrilateral that has **two** pairs of parallel sides?

_____

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

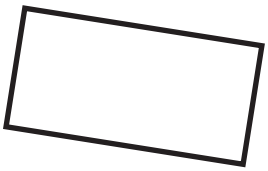
_____

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



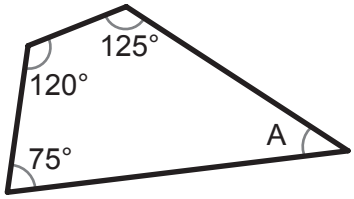
_____

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

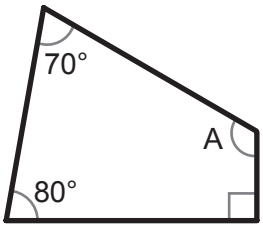


_____

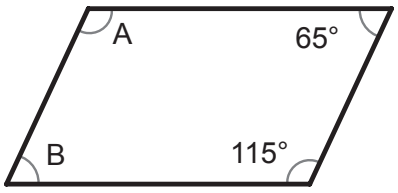
5 Find the unknown angle A.



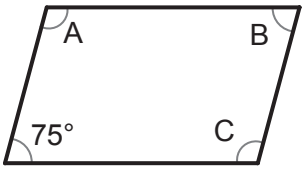
6 Find the unknown angle A.



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



8 Find angle A in this parallelogram.



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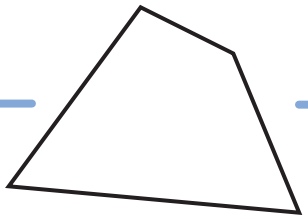
Quadrilaterals Chart

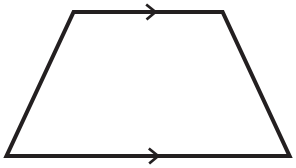
G-QUAD 1

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

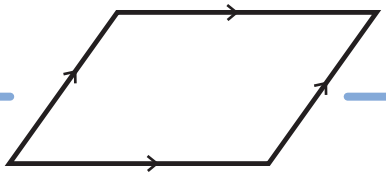
1 Quadrilateral



One Pair of Parallel Sides

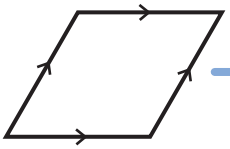
2 Trapezoid

or Trapezium*



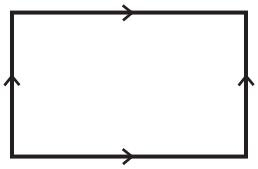
Two Pairs of Parallel Sides

3 Parallelogram



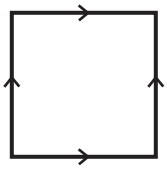
Equal Sides

4 Rhombus



Equal Angles

5 Rectangle



Equal Sides AND Angles

6 Square

* see video for explination

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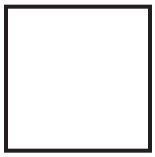
Classifying Quadrilaterals

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.

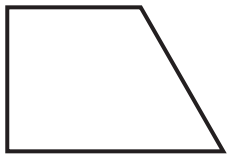
1

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



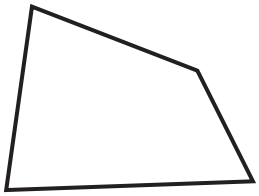
2

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



3

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

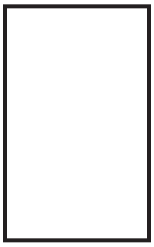


4

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

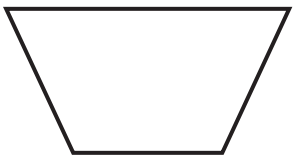
5

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



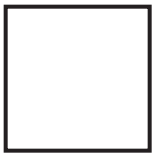
6

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



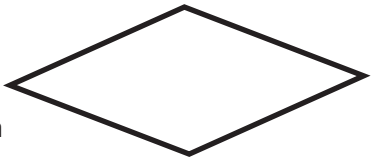
7

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



8

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



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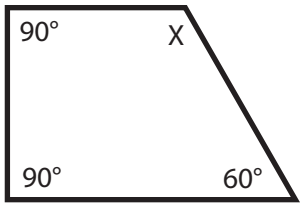
Finding an Unknown Angle

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.

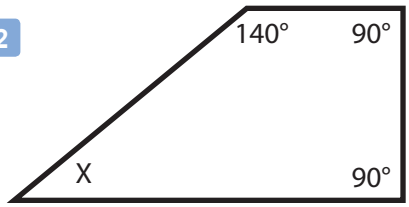
1



m∠X = 120°

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

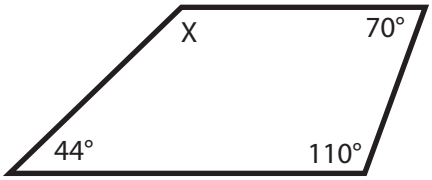
2



m∠X = 40°

$$\begin{array}{r} \overset{2}{1}40 \\ 90 \\ +\ 90 \\ \hline 320 \end{array} \qquad \begin{array}{r} 360 \\ -\ 320 \\ \hline 40 \end{array}$$

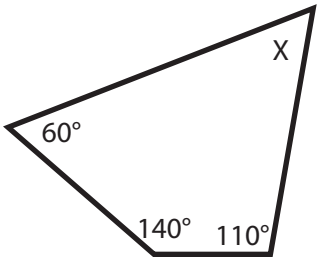
3



m∠X = 136°

$$\begin{array}{r} \overset{1}{1}10 \\ 70 \\ +\ 44 \\ \hline 224 \end{array} \qquad \begin{array}{r} 3\overset{5}{\cancel{6}}\overset{1}{0} \\ -\ 224 \\ \hline 136 \end{array}$$

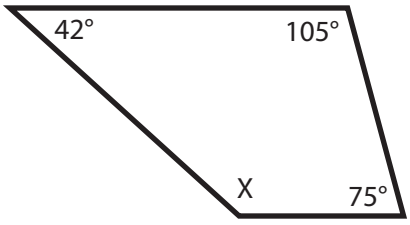
4



m∠X = 50°

$$\begin{array}{r} \overset{1}{1}40 \\ 110 \\ +\ 60 \\ \hline 310 \end{array} \qquad \begin{array}{r} 360 \\ -\ 310 \\ \hline 50 \end{array}$$

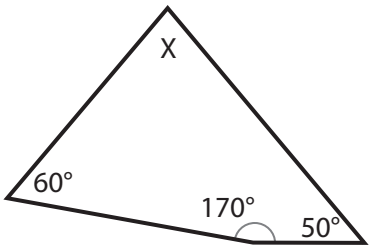
5



m∠X = 138°

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

6



m∠X = 80°

$$\begin{array}{r} \overset{1}{1}70 \\ 60 \\ +\ 50 \\ \hline 280 \end{array} \qquad \begin{array}{r} \overset{2}{\cancel{3}}\overset{1}{6}0 \\ -\ 280 \\ \hline 80 \end{array}$$

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Name:

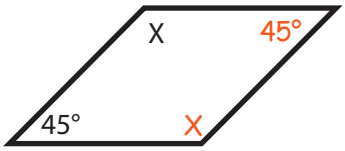
Date:

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.

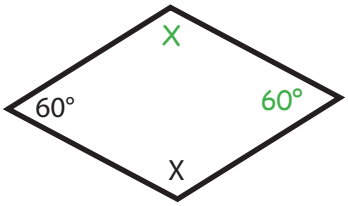
1



m∠X = 135°

$$\begin{array}{r} \overset{1}{4}5 \\ +\ 45 \\ \hline 90 \end{array} \qquad \begin{array}{r} \overset{2}{\cancel{3}}\overset{1}{6}0 \\ -\ 90 \\ \hline 270 \end{array} \qquad \begin{array}{r} 135 \\ 2\overline{)270} \end{array}$$

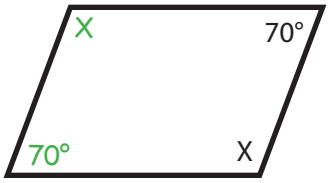
2



m∠X = 120°

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

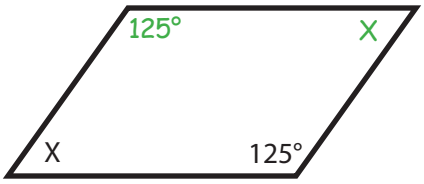
3



m∠X = 110°

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

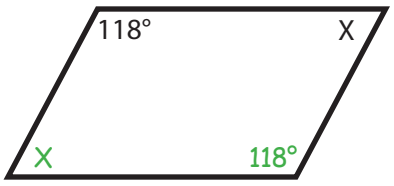
4



m∠X = 55°

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

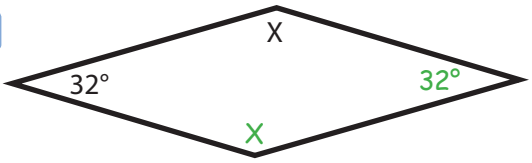
5



m∠X = 62°

$$\begin{array}{r} \overset{1}{1}18 \\ +\ 118 \\ \hline 236 \end{array} \qquad \begin{array}{r} \overset{5}{3}\overset{1}{\cancel{6}}0 \\ -\ 236 \\ \hline 124 \end{array} \qquad \begin{array}{r} 62 \\ 2\overline{)124} \end{array}$$

6



m∠X = 148°

$$\begin{array}{r} 32 \\ +\ 32 \\ \hline 64 \end{array} \qquad \begin{array}{r} \overset{2}{\cancel{3}}\overset{1}{\cancel{6}}\overset{5}{0} \\ -\ 64 \\ \hline 296 \end{array} \qquad \begin{array}{r} 148 \\ 2\overline{)296} \end{array}$$

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math Antics
Exercises

Name: _____

Date: _____

Quadrilaterals

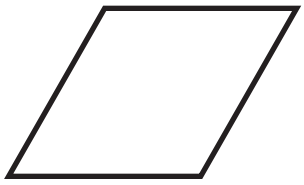
1 What do we call a quadrilateral that has **two** pairs of parallel sides?

a parallelogram

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

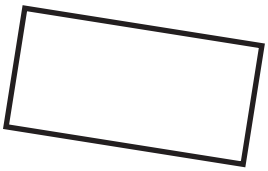
a trapezoid (or trapezium)

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



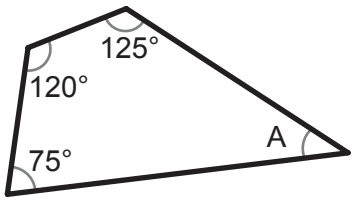
rhombus

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



rectangle

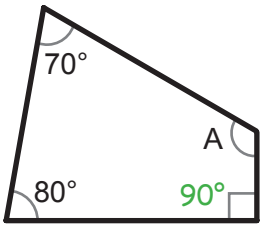
5 Find the unknown angle A.



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

$m\angle A = 40°$

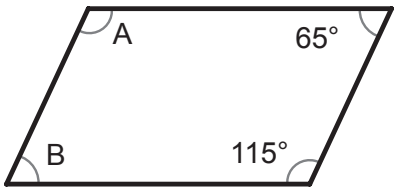
6 Find the unknown angle A.



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

$m\angle A = 120°$

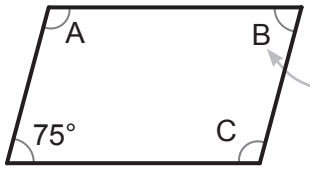
7 Find the unknown angles A and B, in this parallelogram.



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.

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