

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.

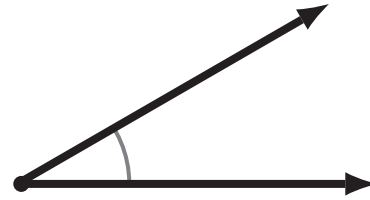


1

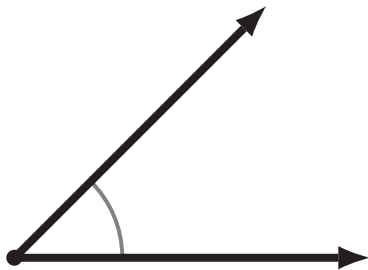


15°

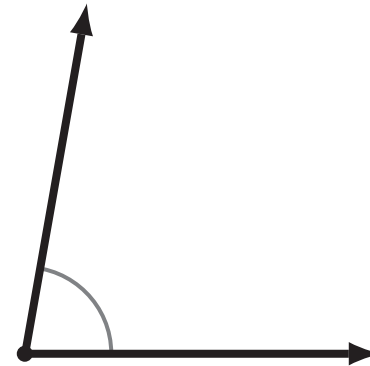
2



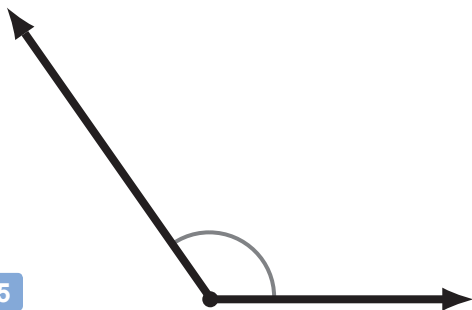
3



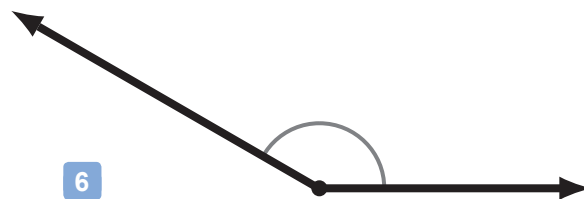
4



5



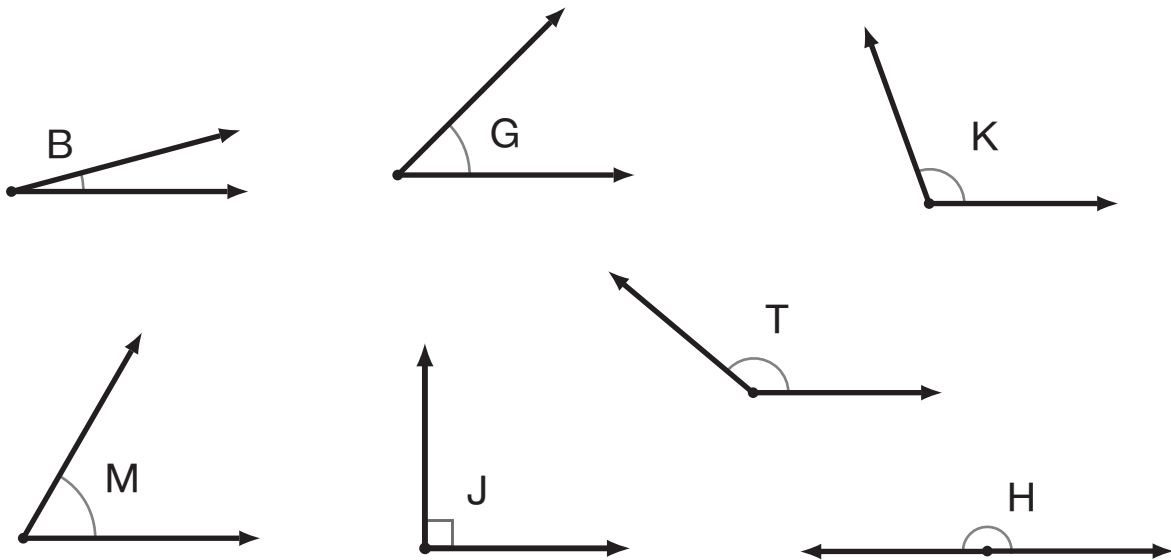
6



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 $\angle B < \angle G$

2 $\angle J \bigcirc \angle G$

3 $\angle M \bigcirc \angle B$

4 $\angle T \bigcirc \angle H$

5 $\angle J \bigcirc \angle K$

6 $\angle J \bigcirc \angle H$

7 $\angle T \bigcirc \angle M$

8 $\angle K \bigcirc \angle G$

9 $\angle G \bigcirc \angle M$

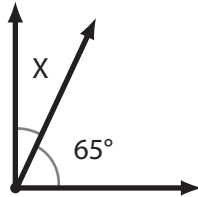
10 $\angle T \bigcirc \angle K$

Finding an Unknown Angle

G-AAD 3

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

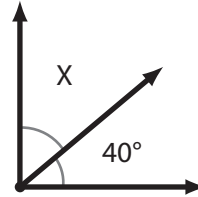
1



$m\angle X = \underline{25^\circ}$

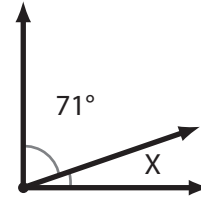
$$\begin{array}{r} 90 \\ - 65 \\ \hline 25 \end{array}$$

2



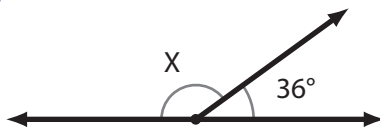
$m\angle X = \underline{\hspace{2cm}}$

3



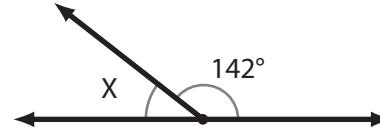
$m\angle X = \underline{\hspace{2cm}}$

4



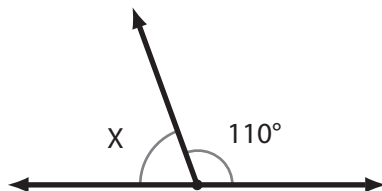
$m\angle X = \underline{\hspace{2cm}}$

5



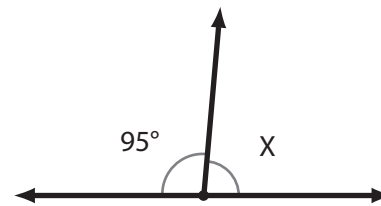
$m\angle X = \underline{\hspace{2cm}}$

6



$m\angle X = \underline{\hspace{2cm}}$

7



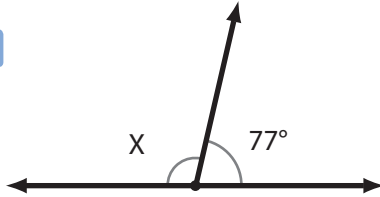
$m\angle X = \underline{\hspace{2cm}}$

Finding an Unknown Angle - Set 2

G-AAD 4

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

1



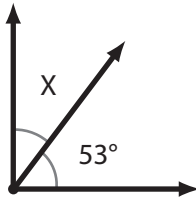
$m\angle X = \underline{\hspace{2cm}}$

2



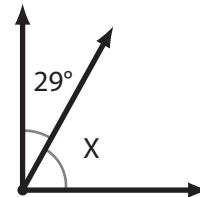
$m\angle X = \underline{\hspace{2cm}}$

3



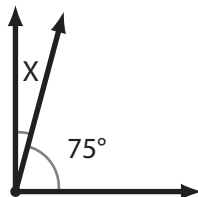
$m\angle X = \underline{\hspace{2cm}}$

4



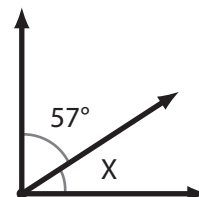
$m\angle X = \underline{\hspace{2cm}}$

5



$m\angle X = \underline{\hspace{2cm}}$

6



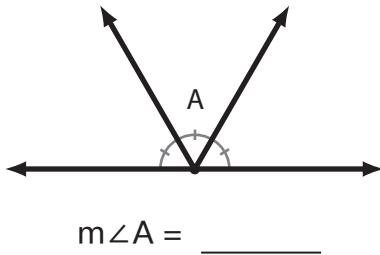
$m\angle X = \underline{\hspace{2cm}}$

Finding an Unknown Angle - Set 3

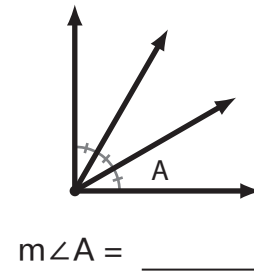
G-AAD 5

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.



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

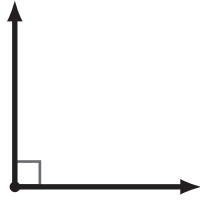


- 3
-
- $m\angle A = \underline{\hspace{2cm}}$

- 4 $m\angle A = m\angle B$
-
- $m\angle A = \underline{\hspace{2cm}}$

Angles and Degrees

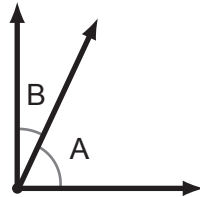
1 What is the size of this angle in degrees?



2 What is the size of this angle in degrees?

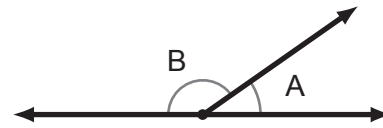


3 Find the unknown angle.



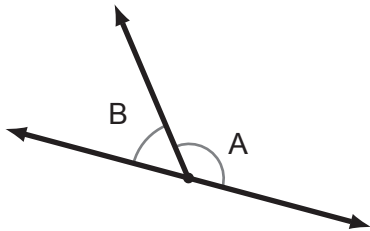
$\angle A$ and $\angle B$ are complementary angles.
If $\angle A$ is 65 degrees, how big is $\angle B$?

4 Find the unknown angle.



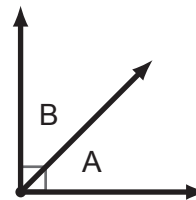
$\angle A$ and $\angle B$ are supplementary angles.
If $\angle A$ is 35 degrees, how big is $\angle B$?

5 Find the unknown angle.



If $\angle A$ is 128 degrees, how big is $\angle B$?

6 Find the unknown angle.



If $\angle A$ is the same size as $\angle B$,
how big is $\angle A$?

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.

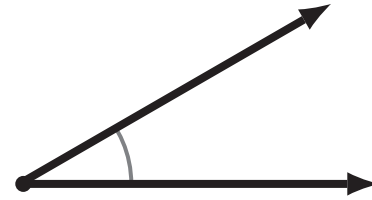


1



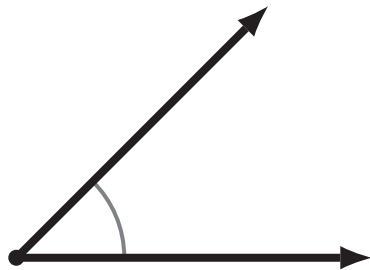
15°

2



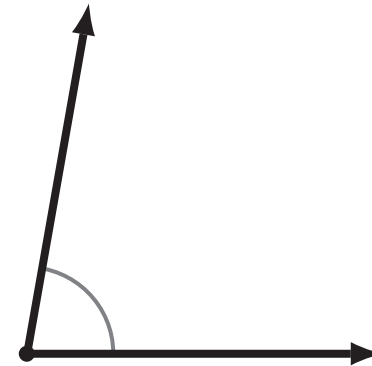
30°

3



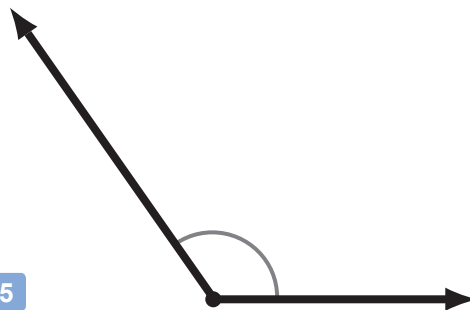
45°

4



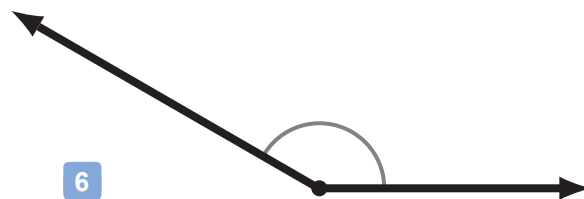
80°

5



125°

6

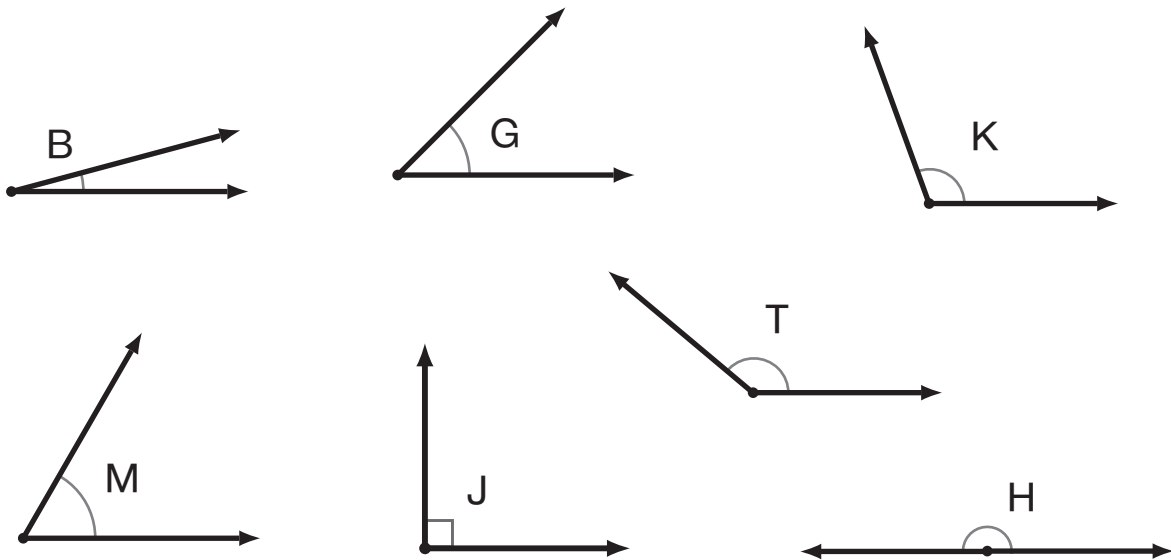


150°

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 $\angle B < \angle G$

2 $\angle J > \angle G$

3 $\angle M > \angle B$

4 $\angle T < \angle H$

5 $\angle J < \angle K$

6 $\angle J < \angle H$

7 $\angle T > \angle M$

8 $\angle K > \angle G$

9 $\angle G < \angle M$

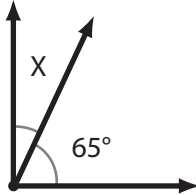
10 $\angle T > \angle K$

Finding an Unknown Angle

G-AAD 3

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

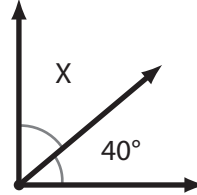
1



$$m\angle X = \underline{25^\circ}$$

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

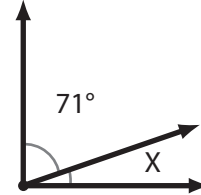
2



$$m\angle X = \underline{50^\circ}$$

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

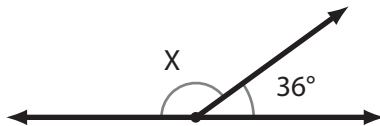
3



$$m\angle X = \underline{19^\circ}$$

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

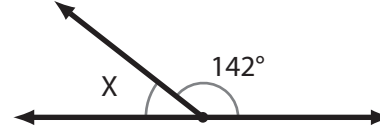
4



$$m\angle X = \underline{144^\circ}$$

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

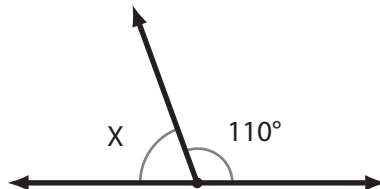
5



$$m\angle X = \underline{38^\circ}$$

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

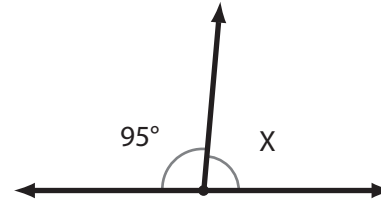
6



$$m\angle X = \underline{70^\circ}$$

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

7



$$m\angle X = \underline{85^\circ}$$

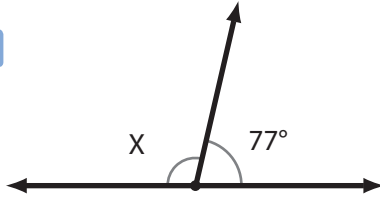
$$\begin{array}{r} 17 \\ 180 \\ - 95 \\ \hline 85 \end{array}$$

Finding an Unknown Angle - Set 2

G-AAD 4

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

1



$$m\angle X = \underline{103^\circ}$$

$$\begin{array}{r} 7 \\ 180 \\ - 77 \\ \hline 103 \end{array}$$

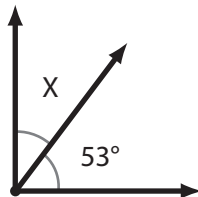
2



$$m\angle X = \underline{18^\circ}$$

$$\begin{array}{r} 7 \\ 180 \\ - 162 \\ \hline 18 \end{array}$$

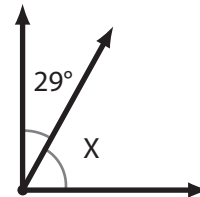
3



$$m\angle X = \underline{37^\circ}$$

$$\begin{array}{r} 8 \\ 90 \\ - 53 \\ \hline 37 \end{array}$$

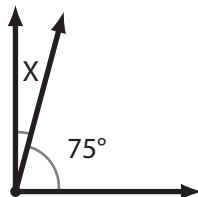
4



$$m\angle X = \underline{61^\circ}$$

$$\begin{array}{r} 8 \\ 90 \\ - 29 \\ \hline 61 \end{array}$$

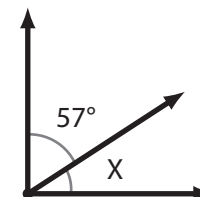
5



$$m\angle X = \underline{15^\circ}$$

$$\begin{array}{r} 8 \\ 90 \\ - 75 \\ \hline 15 \end{array}$$

6



$$m\angle X = \underline{33^\circ}$$

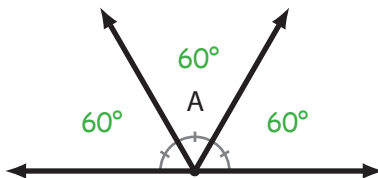
$$\begin{array}{r} 8 \\ 90 \\ - 57 \\ \hline 33 \end{array}$$

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.



$$m\angle A = \underline{60^\circ}$$

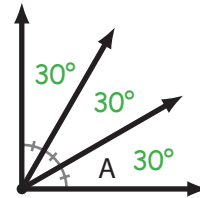
$$3A = 180^\circ$$

so

$$A = 180 \div 3$$

$$A = 60$$

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



$$m\angle A = \underline{30^\circ}$$

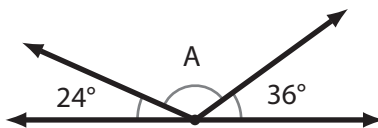
$$3A = 90^\circ$$

so

$$A = 90 \div 3$$

$$A = 30$$

3



$$m\angle A = \underline{120^\circ}$$

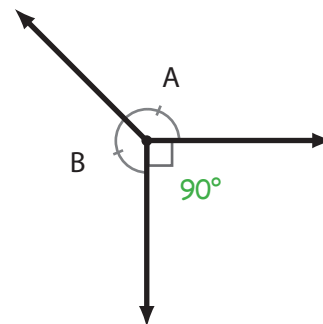
$$A + 24 + 36 = 180^\circ$$

$$A + 60 = 180^\circ$$

$$A = 180 - 60$$

$$A = 120$$

4 $m\angle A = m\angle B$



$$m\angle A = \underline{135^\circ}$$

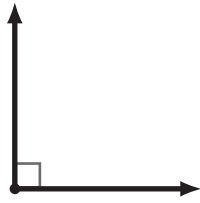
The total of A and B must be 270° because $360^\circ - 90^\circ = 270^\circ$ (remember that a full circle is 360° and a right angle is 90°)
And since we know that A and B are equal, A must be half of 270°

$$A = 270 \div 2$$

$$A = 135$$

Angles and Degrees

1 What is the size of this angle in degrees?



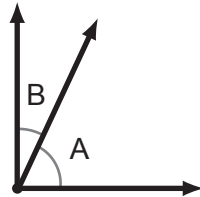
90°

2 What is the size of this angle in degrees?



180°

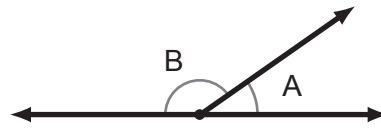
3 Find the unknown angle.



$\angle A$ and $\angle B$ are complementary angles.
If $\angle A$ is 65 degrees, how big is $\angle B$?

$$\begin{array}{r} 8 \\ 90 \\ - 65 \\ \hline 25 \end{array} \quad m\angle B = 25^\circ$$

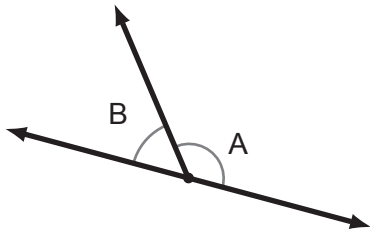
4 Find the unknown angle.



$\angle A$ and $\angle B$ are supplementary angles.
If $\angle A$ is 35 degrees, how big is $\angle B$?

$$\begin{array}{r} 7 \\ 180 \\ - 35 \\ \hline 145 \end{array} \quad m\angle B = 145^\circ$$

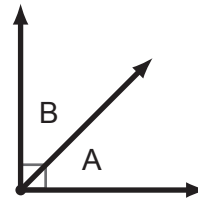
5 Find the unknown angle.



If $\angle A$ is 128 degrees, how big is $\angle B$?

$$\begin{array}{r} 7 \\ 180 \\ - 128 \\ \hline 52 \end{array} \quad m\angle B = 52^\circ$$

6 Find the unknown angle.



If $\angle A$ is the same size as $\angle B$,
how big is $\angle A$?

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!

$$m\angle B = m\angle A = 45^\circ$$