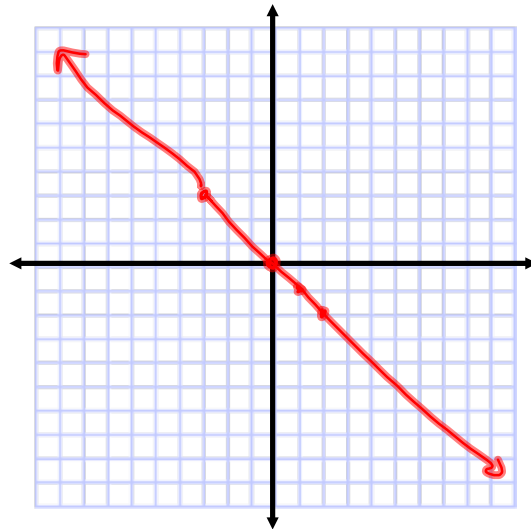




Algebra 4-7: Sum and Differences in Geometry**Warm-Up**

1. Graph the equation $y = -x$

x	y
1	-1
2	-2
-3	3
0	0

$y = -x$
 $y = -1$
 $y = -2$
 $y = -3$



Vocabulary	Definition	Example
Complementary Angles	Form a <u>right angle</u> Add up to <u>90°</u>	
Supplementary Angles	Form a <u>straight line</u> Add up to <u>180°</u>	

$$\begin{array}{r} 180 \\ -30 \\ \hline 150 \end{array}$$



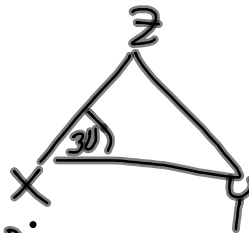
Triangle Sum Theorem says that all angles in a triangle add up to 180°.

Symbols

Triangle:  X Y Z

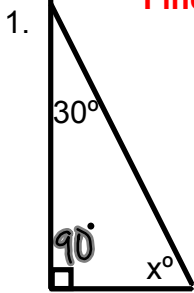
Angle: $\angle X$ or $\sphericalangle X$

Measure of an angle: $m\angle X = 30^\circ$



Examples.

Find x.

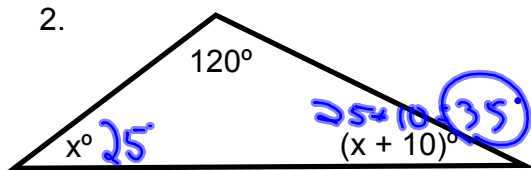


$$30 + x^\circ = 90$$

$$\boxed{x^\circ = 60^\circ}$$

OR

$$\begin{array}{r} 180 \\ -30 \\ -90 \\ \hline 60 = x \end{array}$$

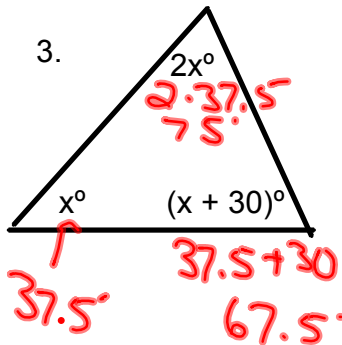


$$120 + (x+10) + x = 180$$

$$2x + 130 = 180$$

$$\begin{array}{r} -130 \quad -130 \\ \hline 2x = 50 \end{array}$$

$$\boxed{x = 25}$$



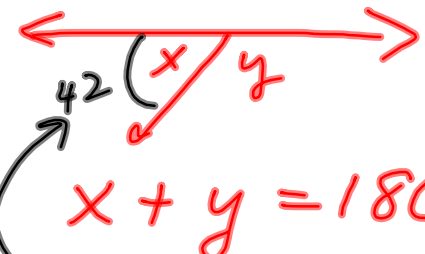
$$\boxed{2x + x + x + 30 = 180}$$

$$4x + 30 = 180$$

$$\begin{array}{r} -30 \quad -30 \\ \hline 4x = 150 \end{array}$$

$$\frac{4x}{4} = \frac{150}{4}$$

$$\boxed{x = 37.5}$$

1. 
 $x + y = 180.$

2 $x = 42.$

$$\begin{array}{r} 180 \\ - 42 \\ \hline y = 138 \end{array}$$