

Math 7 - Unit 5

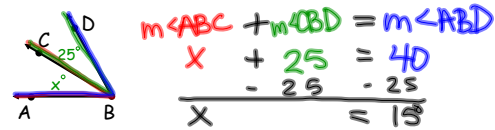
Day 3 - MORE Angle Relationships

Lesson Objectives:

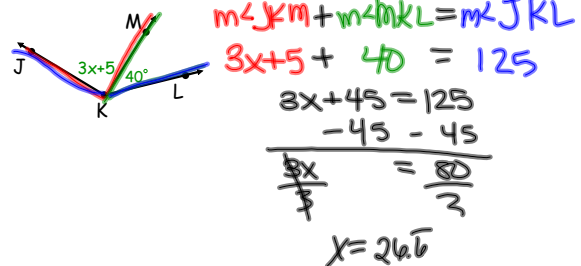
- I can recognize different angle relationships.
- I can use angle relationships to write and solve equation for unknown angles in a figure.

We can write an equation to help find missing measures of angles.

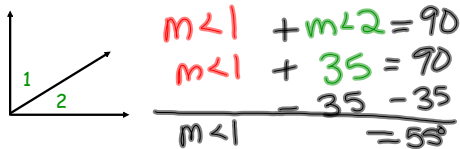
The measure of $\angle ABD$ is 40° . What is the value of x ?



The measure of $\angle JKL$ is 125° . What is the value of x ?



The measure of $\angle 2 = 35^\circ$. Angles 1 and 2 are complementary. Find the measure of $\angle 1$.



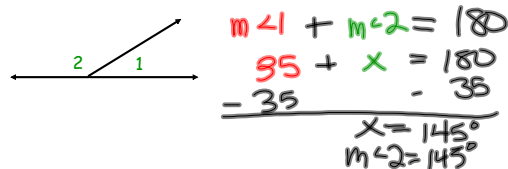
If $m\angle F = 4x^\circ$ and $m\angle G = 70^\circ$, and $\angle F$ and $\angle G$ are complementary, what is the value of x ?

$$m\angle F + m\angle G = 90$$

$$4x + 70 = 90$$

$$\begin{array}{r} 4x + 70 = 90 \\ -70 \quad -70 \\ \hline 4x = 20 \\ \frac{4x}{4} = \frac{20}{4} \\ x = 5 \end{array}$$

The measure of $\angle 1 = 35^\circ$. Angles 1 and 2 are supplementary. Find the measure of $\angle 2$.



$\angle PQR$ and $\angle STU$ are supplementary. If $m\angle PQR = x - 15$ and $m\angle STU = x - 65$, find the measure of each angle.

$$m\angle PQR + m\angle STU = 180$$

$$x-15 + x-65 = 180$$

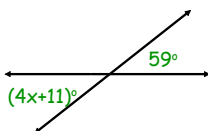
$$2x-80 = 180$$

$$\begin{array}{r} 2x-80 = 180 \\ +80 \quad +80 \\ \hline 2x = 260 \\ \frac{2x}{2} = \frac{260}{2} \\ x = 130 \end{array}$$

$$m\angle PQR = x-15 = 130-15 = 115^\circ$$

$$m\angle STU = x-65 = 130-65 = 65^\circ$$

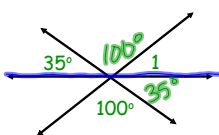
What is the value of x ?



$$4x+11 = 59$$

$$\begin{array}{r} 4x+11 = 59 \\ -11 \quad -11 \\ \hline 4x = 48 \\ \frac{4x}{4} = \frac{48}{4} \\ x = 12 \end{array}$$

What is the measure of $\angle 1$?



$$35 + 100 + m\angle 1 = 180$$

$$135 + m\angle 1 = 180$$

$$\begin{array}{r} 135 + m\angle 1 = 180 \\ -135 \quad -135 \\ \hline m\angle 1 = 45 \end{array}$$

Homework

MORE Angle Relationships WKS

* Individual Think Time *



What to do if you get stuck...

- Reread the problem. Did you write it down correctly?
- Reread your notes. Is there a problem similar that we did together in class?
- Find a problem similar in your book. Try this one to see if it helps.
- Skip the problem until the end of Individual Think Time. Then ask an "educated" question of a neighbor or Mrs. Call.

Today we're working by...

