

Math 7H - Unit 5

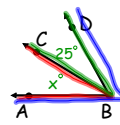
Day 3 - MORE Angle Relationships

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 ?



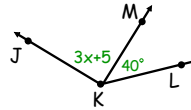
$$m\angle ABC + m\angle CBD = m\angle ABD$$

$$x + 25 = 40$$

$$\underline{-25 \quad -25}$$

$$x = 15$$

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



$$m\angle JKM + m\angle MKL = m\angle JKL$$

$$3x+5 + 40 = 125$$

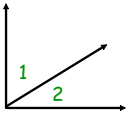
$$3x+45 = 125$$

$$\underline{-45 \quad -45}$$

$$3x = 80$$

$$x = 26.\bar{6}$$

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 ?

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

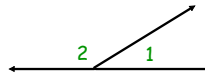
$$4x + 70 = 90$$

$$\underline{-70 \quad -70}$$

$$4x = 20$$

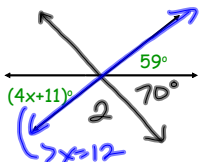
$$x = 5$$

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.

What is the value of x ?



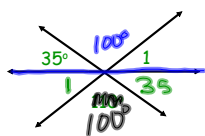
$$59 + 70 + m\angle 2 = 180$$

$$129 + m\angle 2 = 180$$

$$\underline{-129 \quad -129}$$

$$m\angle 2 = 51$$

What is the measure of $\angle 1$?



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

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

$$\underline{-135 \quad -135}$$

$$m\angle 1 = 45^\circ$$

$$35 + 35 + 100 + 100 + m\angle 1 + m\angle 1 = 360$$

$$270 + 2(m\angle 1) = 360$$

$$\underline{-270 \quad -270}$$

$$2(m\angle 1) = 90$$

$$\underline{\div 2 \quad \div 2}$$

$$m\angle 1 = 45^\circ$$

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...

