

Day 1: Angle Relationships and Vocab

$\angle 1$ and $\angle 2$ are complementary angles. $\angle 2$ and $\angle 3$ are supplementary angles. Given the measures of $\angle 1$ below, find $m\angle 2$ and $m\angle 3$.

1. $m\angle 1 = 80^\circ$

$m\angle 2 = \underline{10}$

$m\angle 3 = \underline{170}$

2. $m\angle 1 = 33^\circ$

$m\angle 2 = \underline{57}$

$m\angle 3 = \underline{123}$

3. $m\angle 1 = 72^\circ$

$m\angle 2 = \underline{18}$

$m\angle 3 = \underline{162}$

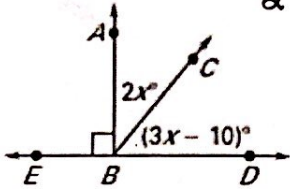
4. $m\angle 1 = 7^\circ$

$m\angle 2 = \underline{83}$

$m\angle 3 = \underline{97}$

Find the value of x . Then, find $m\angle ABC$ and $m\angle CBD$.

5.



$2x + 3x - 10 = 90$

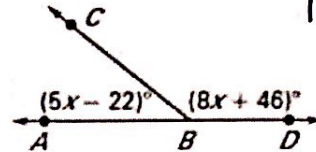
$\frac{5x}{5} = \frac{100}{5}$

$x = 20$

$x = \underline{20}$

$m\angle ABC = \underline{40}^\circ$ $m\angle CBD = \underline{50}^\circ$

6.



$5x - 22 + 8x + 46 = 180$

$13x + 24 = 180$

$\frac{13x}{13} = \frac{156}{13}$

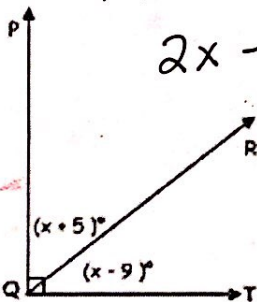
$x = 12$

$x = \underline{12}$

$m\angle ABC = \underline{38}^\circ$ $m\angle CBD = \underline{142}^\circ$

Write an equation to find each value of x . Then, find the measure of each angle.

7.



$x + 5 + x - 9 = 90$

$2x - 4 = 90$

$2x = 94$

$x = 47$

Equation: $(x + 5) + (x - 9) = 90$

$x = \underline{47}$

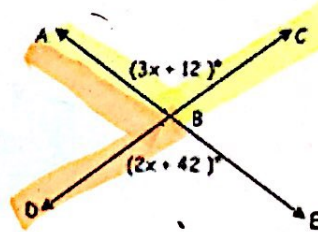
$m\angle PQR = \underline{52}^\circ$

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

*What relationship do these two angles have to each other?

Complementary
~~Adjacent~~ Adjacent

8.



$3x + 12 = 2x + 42$

$x = 30$

Equation: $3x + 12 = 2x + 42$

$x = \underline{30}$

$m\angle ABC = \underline{102}^\circ$

$m\angle ABD = \underline{78}^\circ$

What relationship do these two angles have to each other?

Linear Pair Adjacent
Supplementary