

5-3-17

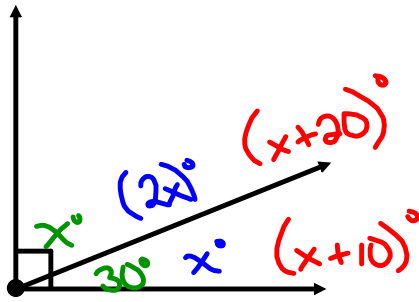
Aim: SWBAT continue to find missing angle measurements algebraically.

Do Now: What are the three angle relationships that have a number associated with the relationship? What number is associated with each?

HW: Finish WS

Quiz Tuesday or Wednesday (Angle Relationships)

Complementary Angles are angles whose sum is 90° .



measure(s).

Solve algebraically.

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

$$\begin{array}{r} x + (2x) = 90 \\ 3x = 90 \\ \hline x = 30 \end{array}$$

$$\begin{array}{r} x = 30 \\ 2x = 60 \end{array}$$

$$\begin{array}{r} 2x \\ 2 \cdot 30 \\ 60 \end{array}$$

$$(x+10) + (x+20) = 90$$

$$\boxed{x+10} + \boxed{x+20} = 90$$

$$2x + 30 = 90$$

$$\begin{array}{r} 2x + 30 = 90 \\ -30 \quad -30 \\ \hline 2x = 60 \end{array}$$

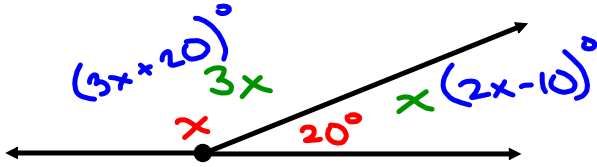
$$\begin{array}{r} 2x = 60 \\ \hline x = 30 \end{array}$$

$$x = 30$$

$$\begin{array}{l} (x+10)^\circ \\ (30+10)^\circ \\ 40^\circ \end{array}$$

$$\begin{array}{l} (x+20)^\circ \\ (30+20)^\circ \\ 50^\circ \end{array}$$

Supplementary Angles are angles whose sum is 180° .



Solve algebraically.

$$\begin{array}{r} x + 20 = 180 \\ -20 \quad -20 \\ \hline x = 160 \end{array}$$

$$x + 3x = 180$$

$$\frac{4x}{4} = \frac{180}{4}$$

$$x = 45$$

$$3x = 135$$

$$\begin{array}{r} 3 \cdot 45 \\ 135 \end{array}$$

$$(3x+20) + (2x-10) = 180$$

$$5x + 10 = 180$$

$$\begin{array}{r} 5x + 10 = 180 \\ -10 \quad -10 \\ \hline 5x = 170 \\ \frac{5x}{5} = \frac{170}{5} \end{array}$$

$$x = 34$$

$$3x + 20 = 122$$

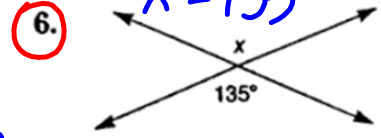
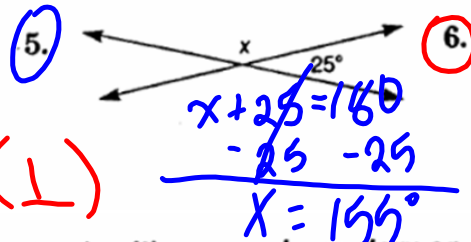
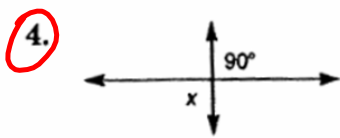
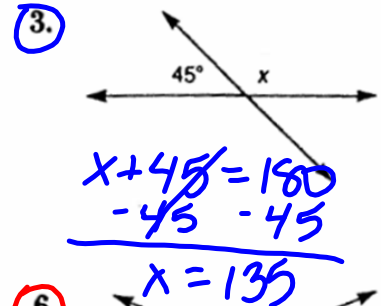
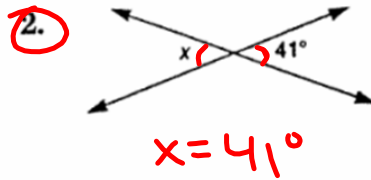
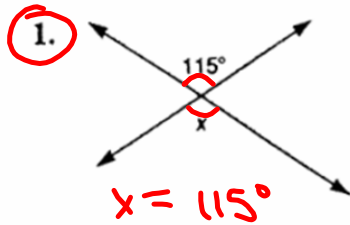
$$2x - 10 = 58$$

vertical : \cong
Angle Relationships

complementary : 90°

supplementary
 180°

Find the value of x in each figure.



perpendicular (\perp)

Each of the following pairs of angles is either complementary or supplementary. Find the measure of each angle.

