

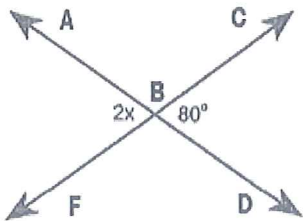
Name: Key

Angle Relationships: Practice

Directions: Find the measurement of the given angle.

Use the figure to the right. Show Geometry and justify your SET UP!

1. Find x .



Geometry:

$$\angle ABF \cong \angle CBD$$

$$2x = 80$$

$$x = 40$$

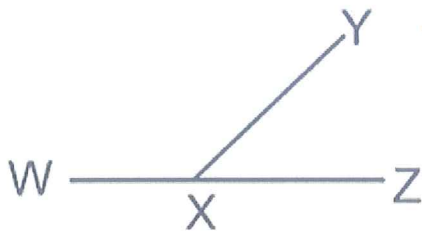
Justify:

Vertical \angle s
are \cong

2. If $\angle WXY$ and $\angle YXZ$ are linear pairs, $\angle WXY = x + 10$ and $\angle YXZ = 3x + 10$.

Geometry:

Justify:



$$\angle WXY + \angle YXZ = 180$$

$$x + 10 + 3x + 10 = 180$$

$$4x + 20 = 180$$

$$4x = 160$$

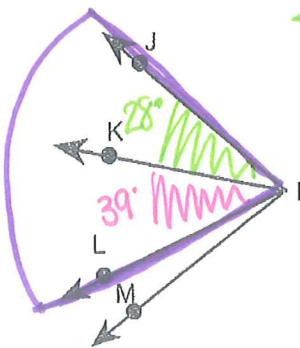
$$x = 40$$

linear pairs
are suppl.

3. $m \angle KIJ = 28^\circ$, $m \angle LIK = 39^\circ$. Find $m \angle LIJ$.

Geometry:

Justify:



$$\angle KIJ + \angle LIK = \angle LIJ$$

$$28 + 39 = \angle LIJ$$

$$67^\circ = \angle LIJ$$

angle addition

4. If $\angle 10$ and $\angle 11$ are complementary angles, $m\angle 10 = 32^\circ$ then $m\angle 11 = \underline{58^\circ}$.

Geometry:

$$\begin{aligned}\angle 10 + \angle 11 &= 90^\circ \\ 32 + \angle 11 &= 90^\circ\end{aligned}$$

Justify:

def of compl.

5. If $\angle 14$ and $\angle 15$ are supplementary angles, $m\angle 14 = 68^\circ$ then $m\angle 15 = \underline{112^\circ}$.

Geometry:

$$\begin{aligned}\angle 14 + \angle 15 &= 180^\circ \\ 68 + \angle 15 &= 180^\circ\end{aligned}$$

Justify:

def of suppl.

6. If $\angle 5$ and $\angle 6$ are complementary angles, $\angle 6$ and $\angle 7$ are supplementary angles, and $m\angle 5 = 34^\circ$ then $m\angle 6 = \underline{56^\circ}$ and $m\angle 7 = \underline{93^\circ}$.

Geometry:

$$\begin{aligned}\angle 5 + \angle 6 &= 90 \text{ def of compl.} \\ 34 + \angle 6 &= 90 \\ \boxed{\angle 6 = 56^\circ}\end{aligned}$$

Justify:

$$\begin{aligned}\angle 6 + \angle 7 &= 180 \text{ def of suppl.} \\ 56 + \angle 7 &= 180 \\ \boxed{\angle 7 = 93^\circ}\end{aligned}$$

Rapid practice: No justifying needed.

Directions: Find the measurement of the given angle.

7. $m\angle VZT$

115°

8. $m\angle XZT$

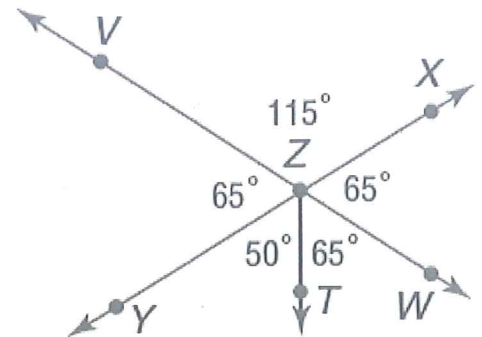
130°

9. $m\angle WZY$

115°

10. $m\angle VZW$

180°



Directions: Find the measurement of the given angle. If the $m\angle 1 = 65^\circ$

Use the figure to the right.

11. $m\angle 2$

65°

12. $m\angle DFC$

115°

13. $m\angle EFB$

115°

14. $m\angle EFA$

25°

