

Geometry G
Section 1.4 Day 2

Use the figure on the right to name each of the following.

1. Name a pair of complementary angles.

$\angle PMQ$ & $\angle LMQ$

2. Name a pair of supplementary angles.

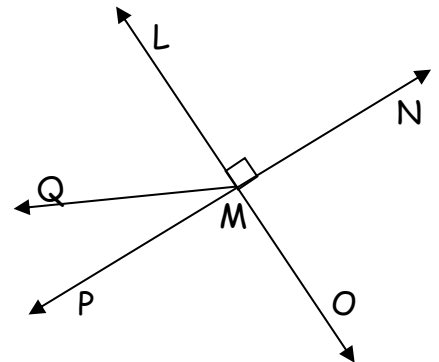
$\angle LMN$ & $\angle PMO$

3. Name a different pair of supplementary angles.

$\angle PMQ$ & $\angle QMN$

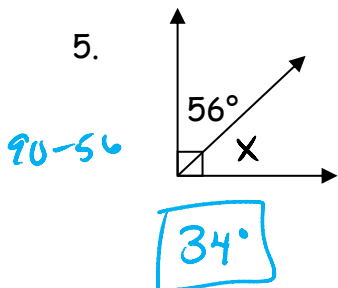
4. Name a linear pair.

$\angle PMO$ & $\angle NMO$

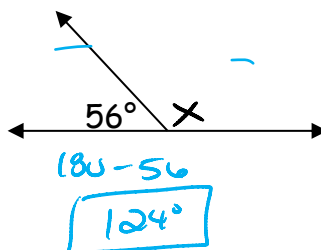


Find the measure of each angle

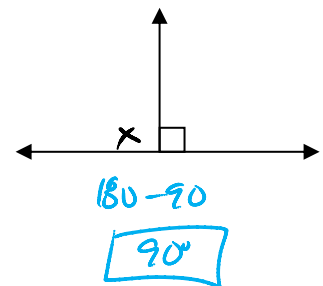
5.



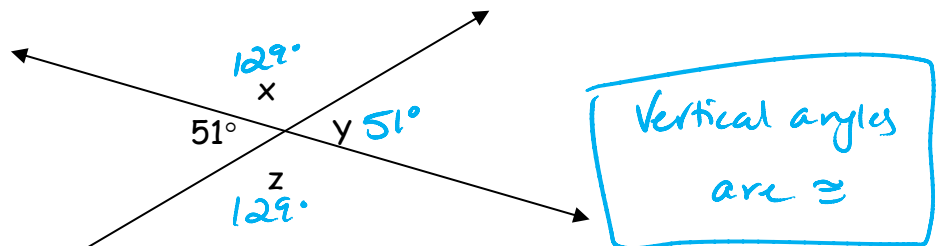
6.



7.



- 8) Find x , y , and z

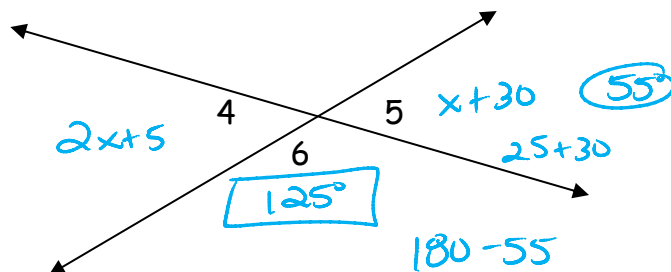


- 9) Given: $m\angle 4 = (2x + 5)^\circ$

$$m\angle 5 = (x + 30)^\circ$$

Find: $m\angle 6$

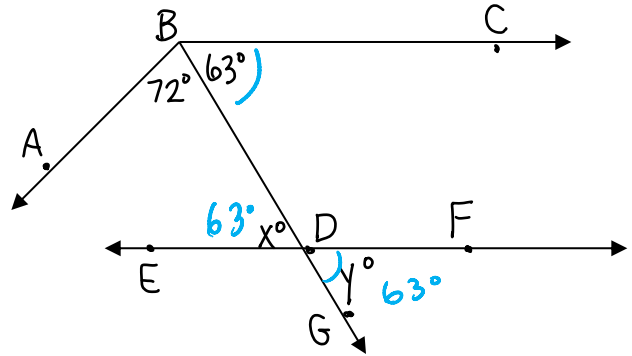
$$\begin{array}{r} 2x + 5 = x + 30 \\ -x \quad -x \\ \hline x + 5 = 30 \\ -5 \quad -5 \\ \hline x = 25 \end{array}$$



10) Find x and y if $\angle CBD$ is congruent to $\angle FDG$.

$$x = 63^\circ$$

$$y = 63^\circ$$



Geometry Meets Algebra

11) Angles A and B are complementary. If $m\angle A = x$ and $m\angle B = 5x$, find x . Then find $m\angle A$ and $m\angle B$.

$$x + 5x = 90$$

$$6x = 90$$

$$x = 15$$

$$m\angle A = 15^\circ, 75^\circ = m\angle B$$

12) Angles C and D are supplementary. If $m\angle C = 12x$ and $m\angle D = 4(x + 5)$, find x . Then find the angles.

$$12x + 4(x + 5) = 180$$

$$12x + 4x + 20 = 180$$

$$16x + 20 = 180$$

$$\begin{array}{r} -20 \quad -20 \\ \hline 16x = 160 \\ \frac{16}{16} \quad \frac{16}{16} \end{array}$$

$$x = 10$$

$$m\angle C = 12(10)$$

$$\boxed{120^\circ}$$

$$m\angle D = 4(10 + 5)$$

$$= 4(15)$$

$$\boxed{60^\circ}$$

13) The ratio of the measures of two complementary angles is 2:3. What is the measure of the smaller angle?

$$2x + 3x = 90$$

$$\frac{5x = 90}{5 \quad 5}$$

$$x = 18$$

$$2(18)$$

$$\boxed{36^\circ}$$

Use the information below to find the measure of each angle in the diagram. Label the Picture!

$\angle DAB$ is a right angle

$\angle ADE$ is a right angle

$\angle 1 = 53^\circ$

$m\angle 1 = m\angle 12$

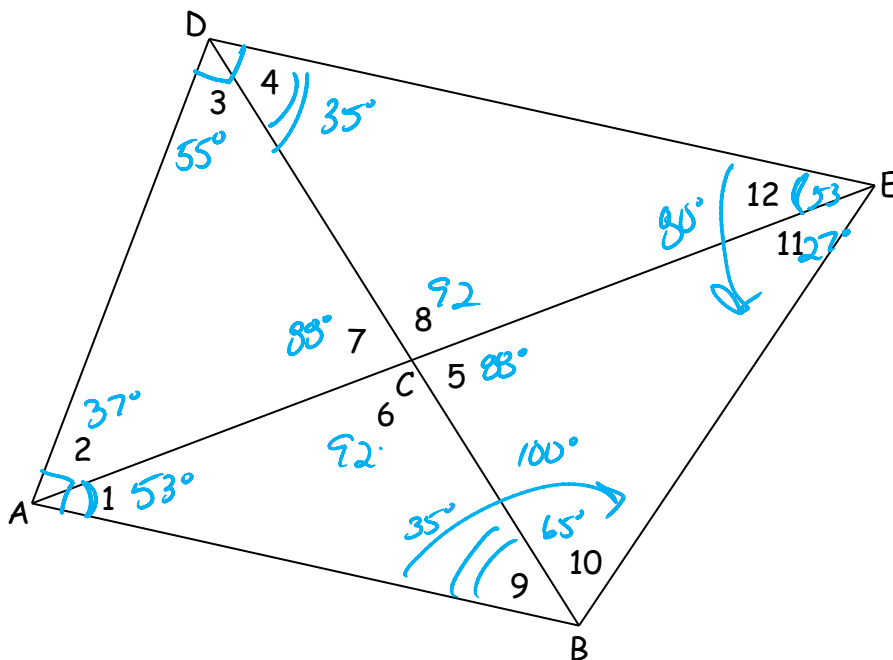
$\angle 3 = 55^\circ$

$\angle 5 = 88^\circ$

$m\angle 4 = m\angle 9$

$\angle ABE = 100^\circ$

$\angle DEB = 80^\circ$



Record your answers here:

$\angle 1 = 53^\circ$

$\angle 3 = 55^\circ$

$\angle 5 = 88^\circ$

$\angle 7 = 88^\circ$

$\angle 2 = 37^\circ$

$\angle 4 = 35^\circ$

$\angle 6 = 92^\circ$

$\angle 8 = 92^\circ$

$\angle 9 = 35^\circ$

$\angle 12 = 53^\circ$

$\angle 10 = 65^\circ$

$\angle 11 = 27^\circ$