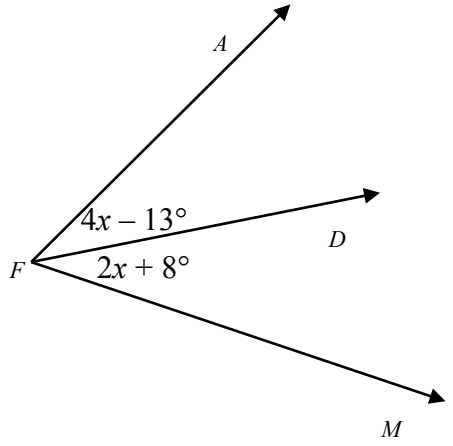
A.M.D.G.

Geometry Accelerated Name: _____
Chapter 1 Practice

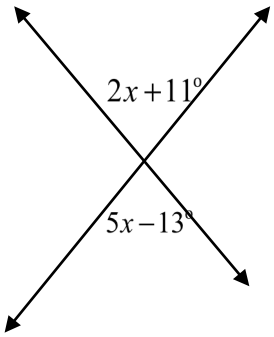
1. Explain what is wrong with the statement $\angle ABC = \angle DEF$. What could you do to correct the statement?

2. Given the illustration of angles below and that $\overrightarrow{FD}$ bisects $\angle AFM$, find the value of x. Use this to find the measures of $\angle AFD$, $\angle DFM$, and $\angle AFM$.

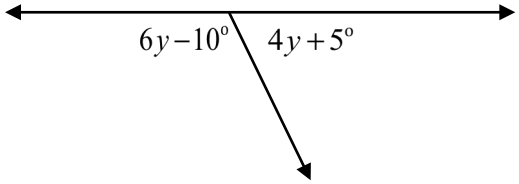


3. Solve for x and y in the diagrams below. (Note: diagrams are not to scale.) In each case indicate what type of angle pair is indicated in the diagram.

a)

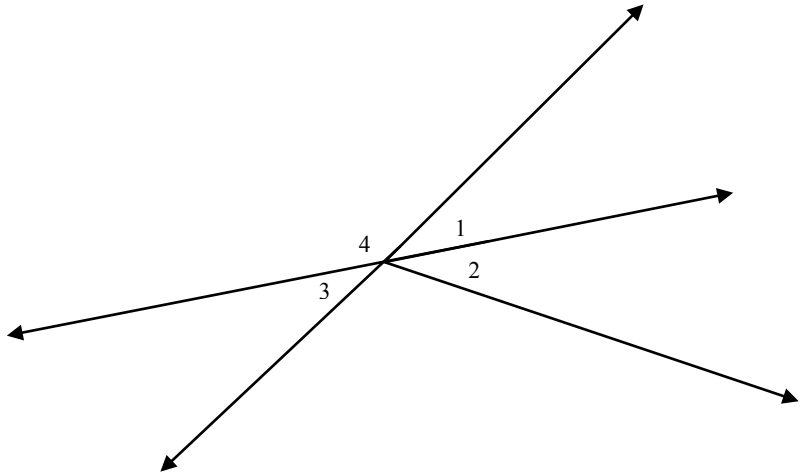


b)



4. Given that the point P is the between E and M, and $EM = 32$ cm, $EP = 6x + 9$, and $PM = 4x + 3$. Find the values of x, EP, PM, and EM. What is the name of the postulate that allows you to set up this equation?

5. Use the illustration below to identify each of the following. (Note: If something appears to be a straight line, you can assume that it is.)



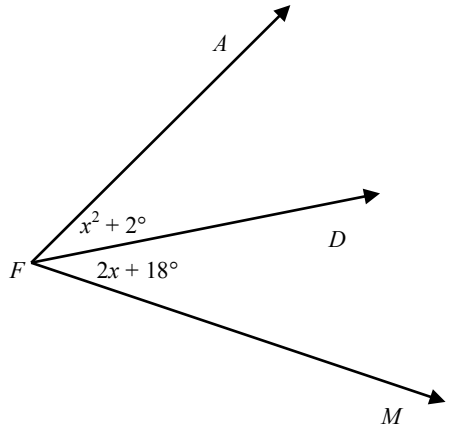
a) A linear pair of angles:

b) A pair of vertical angles:

c) A pair of adjacent angles that are **not** also a linear pair:

d) A pair of angles that is neither adjacent nor vertical:

6. Given the illustration of angles below and $m\angle AFM = 68^{o}$, find the value of x. Use this to find the measures of $\angle AFD$, $\angle DFM$, and $\angle AFM$. What is the name of the postulate that allows you to do this?



7. Given that A is the midpoint of $\overline{NQ}$, and $NA = x^2$ and $AQ = 5x - 4$. Find the value of x, NA, AQ, and NQ.

8. Given M is the midpoint of $\overline{AB}$, M is at (2, 8) and A is at (9, -1).

   a) Find the coordinates of B. Show work and/or draw a diagram.

   b) Find the length (distance) of $\overline{AB}$. Show work and/or draw a diagram.