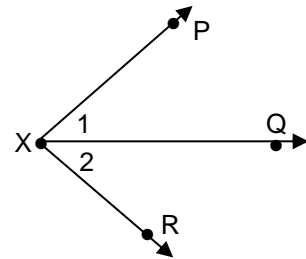Name_____

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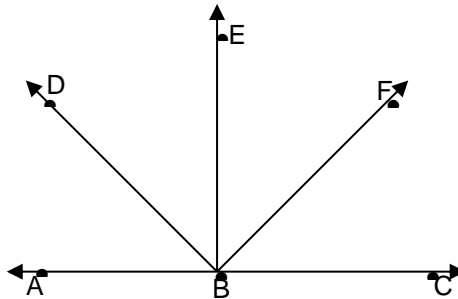
2.2 Homework
ALL WORK MUST BE SHOWN FOR CREDIT.

1.Two angles are complementary. The measure of the larger angle is 5 times the measure of the smaller angle. Find the measure of the larger angle.

2. In the diagram, suppose $\overrightarrow{XQ}$ bisects $\angle PXR$ and the $m\angle 1 = (x^2)°$ and the $m\angle 2 = (x + 30)°$.

Find the m$\angle$PXR.

3. For #3, use the diagram below. In the diagram, $\overrightarrow{BE}$ is perpendicular to $\overleftrightarrow{AC}$ and $\overrightarrow{BD}$ is perpendicular to $\overrightarrow{BF}$.

The m$\angle$ABD = $(3x – 12)°$, m$\angle$DBE = $(2x + 2)°$, and the m$\angle$EBF is $(2x + 8)°$, find the value of x.
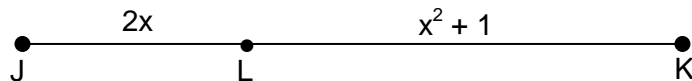
For #4, B is the midpoint of $\overline{AC}$. Find the value of x and the length of AB. Box the answers that work in the problem situation.

4.   AB = $3x - 2$ BC = $2x - 1$

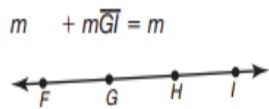5. B is the midpoint of $\overline{AC}$. AC = 100. AB = x + y. BC = 3x – 2y. Find x and y.

6.

$\overline{JK}$, shown below, is 9 inches long. If point L is on $\overline{JK}$ such that JL is equal to 2x and LK is equal to x^2 + 1, what is the value of x?

$$\begin{array}{ccc} 2x & & x^2 + 1 \\ \bullet\!\!-\!\!-\!\!-\!\!-\!\!-\!\!-\!\!\bullet\!\!-\!\!-\!\!-\!\!-\!\!-\!\!-\!\!-\!\!-\!\!-\!\!-\!\!\bullet \\ J & L & K \end{array}$$

7.   The measure of the supplement of an angle is one fourth the measure of the angle. What is the measure of each angle?

Complete each statement. Then write the postulate you used.

8.
m   + m$\overline{GI}$ = m

9.
m∠   + m∠RPS = m∠RPT