In the diagram, $m\angle 6 = 72°$.
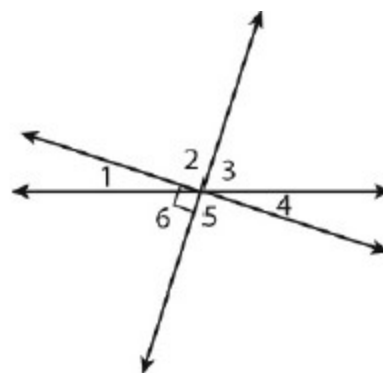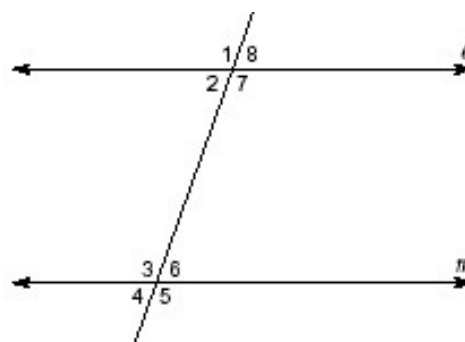
1) Find $m\angle 1$.

2) Find $m\angle 2$.

3) Find $m\angle 3$.

4) Find $m\angle 4$.

5) Find $m\angle 5$.

6) Describe the relationship between $\angle 1$ and $\angle 4$.

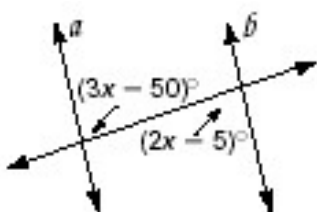7) Describe the relationship between $\angle 1$ and $\angle 6$.

For Problems 8-12, assume $\ell \| m$. State the name of the special relationship, and then find the missing angle.

8) If $m\angle 7 = 100°$, find $m\angle 3$.

9) If $m\angle 7 = 95°$, find $m\angle 6$.

10) If $m\angle 1 = 120°$, find $m\angle 5$.

11) I If $m\angle 4 = 20°$, find $m\angle 2$.
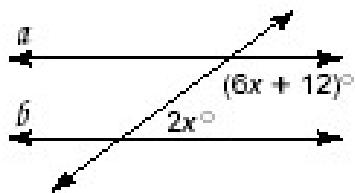
12) If $m\angle 5 = 140°$, find $m\angle 5$.

For Problems 13-14, assume $a \| b$. State the name of the special relationship, and then find x.
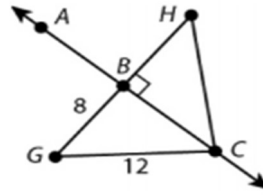
13)

$(3x - 50)°$

$(2x - 5)°$

14)

$(6x + 12)°$

$2x°$

For Problems 15-17, use the diagram below in which $\overleftrightarrow{AC}$ is a perpendicular bisector of $\overline{GH}$. Find the unknown value.

15) $GH =$

16) $CH =$

17) $BC =$

18) Find the slope of the line passing through the points $(-2,5)$ and $(3,7)$.

19) Write the equation (in any form) for the line in problem 18.

20) Write the equation (in any form) of the line PARALLEL to the line $y = \frac{4}{7}x - 6$ that passes through the point $(-1,3)$.

21) Write the equation (in any form) of the line PERPENDICULAR to the line $y = -\frac{3}{5}x + 7$ that passes through the point $(4, -3)$.