Math 3
Unit 6 Day 1 HW

Name:
Date: $\qquad$
Directions: Name each of the following types of angles. Then, state whether they are congruent or supplementary.


Directions: Find the value of $x$ in each question given that lines land $m$ are parallel. Check your answers by finding the measure of each angle.

$m \angle C=3 x-10 ;$
5. $m \angle F=x+70$
6.
$m \angle D=x+27 ;$
$m \angle F=2 x-39$
7. $m \angle B=2(x+40)$;
$m \angle G=5 x+44$
$\square$

Directions: Solve for the following. Show all work in the space provided.
8. Given that $m \angle 4=3 x+10$ and $m \angle 12=2 x+30$, find the value of $x, m \angle 4, m \angle 10$.


$$
\begin{aligned}
& \mathrm{x}= \\
& \mathrm{m}<4= \\
& \mathrm{m}<10=
\end{aligned}
$$

9. In the accompanying diagram, line $\ell$ is parallel to line $m$, and line $t$ is a transversal. Which must be a true statement?
(1) $m \angle 1+m \angle 4=180$
(3) $m \angle 3+m \angle 6=180$
(2) $m \angle 1+m \angle 8=180$
(4) $m \angle 2+m \angle 5=180$

10. The accompanying diagram shows two parallel roads, Hope Street and Grand Street, crossed by a transversal road, Broadway. If $m \angle 1=110$, what is the measure of $m \angle 7$ ?
(1) $40^{\circ}$
(3) $110^{\circ}$
(2) $70^{\circ}$
(4) $180^{\circ}$

11. In the accompanying figure, what is one pair of alternate interior angles?
(1) $\angle 1$ and $\angle 2$
(3) $\angle 4$ and $\angle 6$
(2) $\angle 4$ and $\angle 5$
(4) $\angle 6$ and $\angle 8$

12. Find the value of $x$ and $y$.


$$
\begin{aligned}
& x= \\
& y=
\end{aligned}
$$

