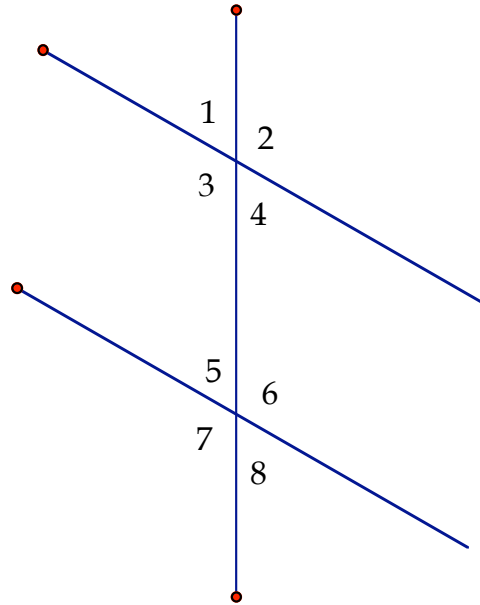


Chapter 2: Perpendicular / Parallel
Lesson 2-4: Angles and Parallel Lines
Homework

name _____
 date _____
 period ____

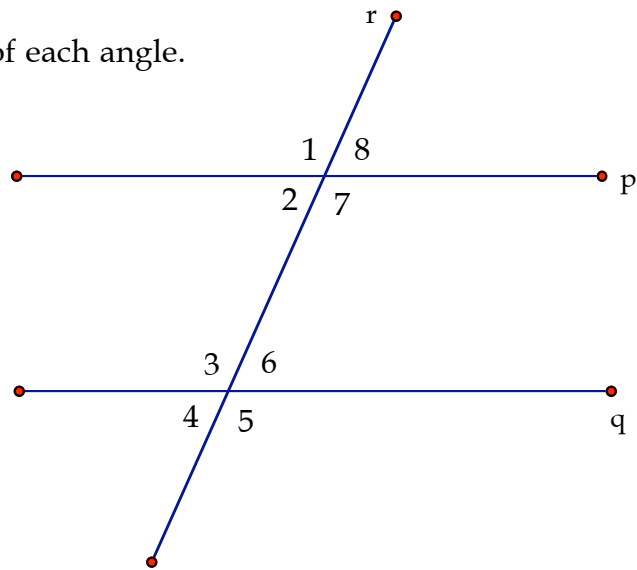
Refer to the figure and list all pairs:

1. Corresponding Angles:
2. Alternate Interior Angles:
3. Alternate Exterior Angles:



In the figure, $p \parallel q$. Find the measure of each angle.

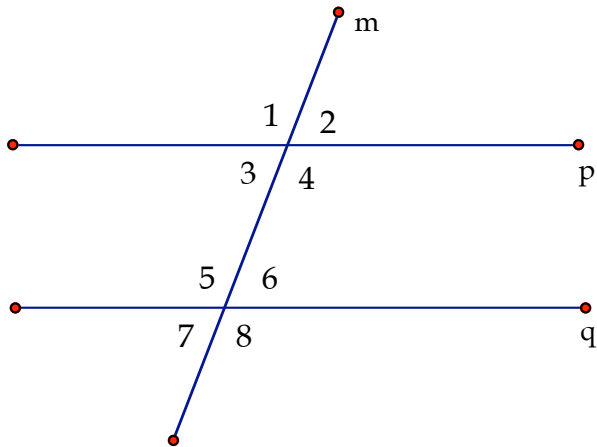
4. If $m\angle 1 = 110$, find $m\angle 3$.
5. If $m\angle 2 = 85$, find $m\angle 3$.
6. If $m\angle 4 = 35$, find $m\angle 8$.
7. If $m\angle 6 = 70$, find $m\angle 2$.
8. If $m\angle 3 = 120$, find $m\angle 8$.
9. If the $m\angle 2 + m\angle 4 = 100$
find $m\angle 5$.
10. If the $m\angle 7 = 5x + 10$ and
 $m\angle 5 = 40$, find x .
11. If $r \perp p$, find $m\angle 6$.



12. Complete the following proof.

Given: - $p \parallel q$
- m is a transversal of p and q

Prove: $\angle 1 \cong \angle 8$, $\angle 2 \cong \angle 7$



We are given that $p \parallel q$. If two parallel lines are cut by a transversal, corresponding angles are congruent. So, $\angle 1 \cong \angle 5$ and $\angle 2 \cong \angle 6$. $\angle 5 \cong \angle 8$ and $\angle 6 \cong \angle 7$ because vertical angles are congruent. Therefore, $\angle 1 \cong \angle 8$ and $\angle 2 \cong \angle 7$ since congruence of angles is transitive.