

CP Geometry
More with Transversals

Name: _____

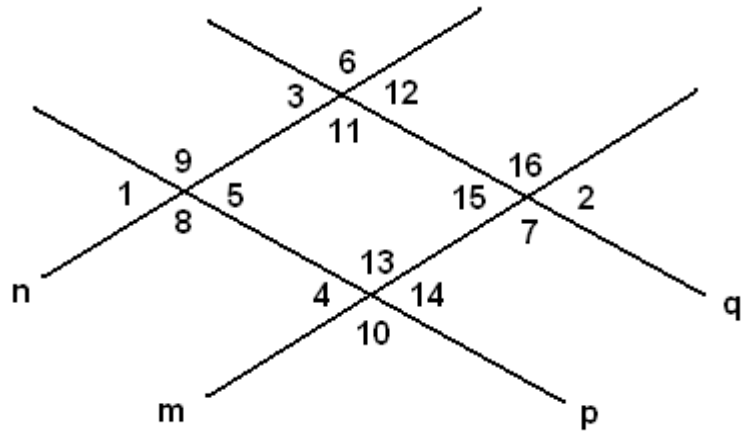
1.) Given the figure, list off all pairs of each of the following angles **using p as the transversal**.

Corresponding Angles:

Alternate Interior Angles:

Same-Side Interior Angles:

Alternate Exterior Angles:



2.) Given the figure above, list off all pairs of each of the following angles **using n as the transversal**.

Corresponding Angles:

Alternate Interior Angles:

Same-Side Interior Angles:

Alternate Exterior Angles:

3.) Given the figure above, list off all pairs of each of the following angles **using m as the transversal**.

Corresponding Angles:

Alternate Interior Angles:

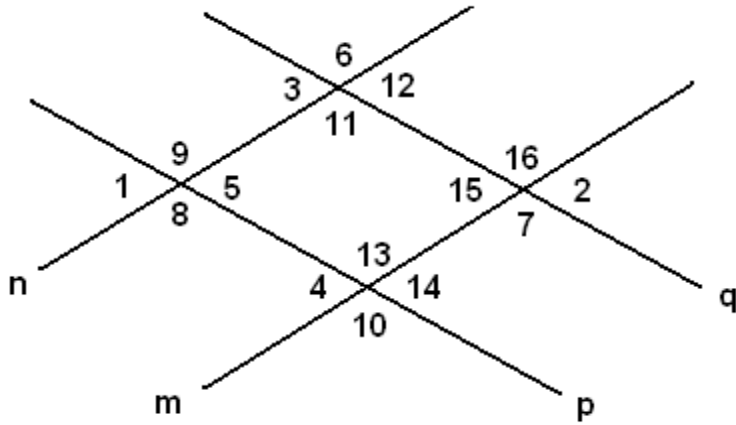
Same-Side Interior Angles:

Alternate Exterior Angles:

4.) Create a two-column proof of the statement on separate paper:
 (Hint: you might want to start with a picture of the situation.)

"If a transversal crosses two lines such that their alternate exterior angles are congruent, then the lines are parallel."

- 5.) Given the problem situation, find the value of the variables and determine which lines are parallel (if any).



Given:

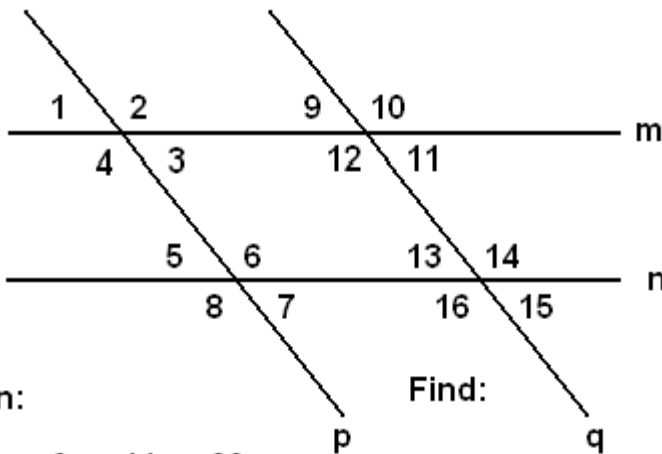
$$\begin{aligned} m\angle 5 &= 8y + 88 \\ m\angle 13 &= 42x - 39 \\ m\angle 15 &= 70 - 6y \\ m\angle 12 &= 10x + 47 \\ m\angle 4 &= 20x + 2 \\ m\angle 2 &= 16x + 26 \end{aligned}$$

Find:

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

Which lines are parallel?
(if any)

- 6.) Given the problem situation, find the value of the variables and determine which lines are parallel (if any).



Given:

$$\begin{aligned} m\angle 9 &= 9x + 11y + 20 \\ m\angle 5 &= 8x + 18y + 13 \\ m\angle 13 &= 7x + 19y + 12 \\ m\angle 4 &= 57x + 19y - 14 \\ m\angle 7 &= 20y + 2x + 17 \\ m\angle 16 &= 29x + 15y + 29 \end{aligned}$$

Find:

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

Which lines are parallel
(if any)?