

Transversals

5-1-17

Line m is parallel to line n . Tell if the angles are **corresponding**, **alternate interior**, **alternate exterior**, **consecutive interior**, or **none of these**.

$\angle 1$ and $\angle 5$ Corresponding

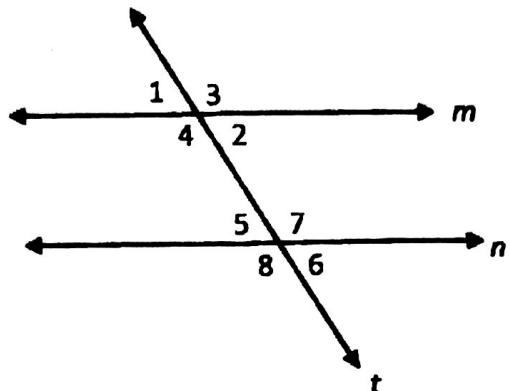
$\angle 2$ and $\angle 7$ Consecutive Interior

$\angle 3$ and $\angle 5$ None. 3 exterior 5 interior

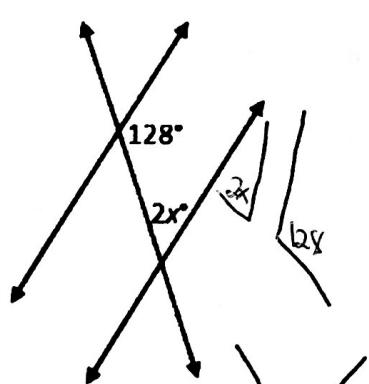
$\angle 3$ and $\angle 8$ Alternate exterior

$\angle 4$ and $\angle 7$ Alternate interior

$\angle 4$ and $\angle 8$ Corresponding



1. $x = \underline{26}$



Work

$$\begin{aligned} 128 + 2x &= 180 \\ -128 &\quad -128 \end{aligned}$$

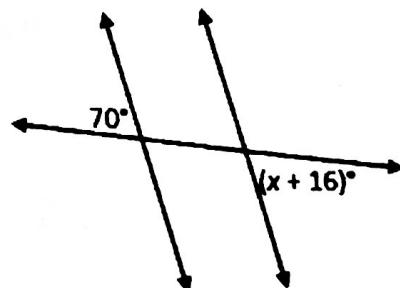
$$\begin{aligned} 2x &= 52 \\ 2 &\quad 2 \\ x &= 26 \end{aligned}$$

They make
a line.
Add them
up to

180.

26

2. $x = \underline{54}$

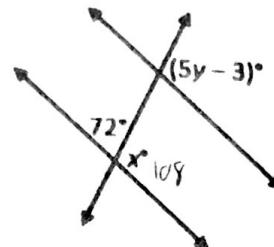


Work

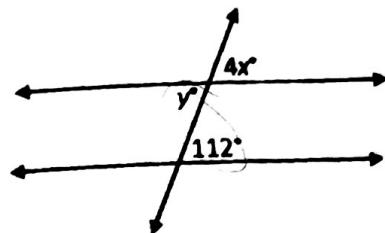
$$\begin{aligned} 70 &= x + 16 \\ -16 &\quad -16 \\ 54 &= x \end{aligned}$$

They are congruent.
Make them
equal

$$4. \begin{array}{l} x = 108 \\ y = 37 \end{array}$$



$$3. \begin{array}{l} x = 28 \\ y = 112 \end{array}$$



Work

$$\begin{aligned} 72 + x &= 180^\circ \\ -72 & \\ x &= 108 \\ 5y - 3 &= x \\ 5y - 3 &= 108 \\ +3 &+3 \\ 5y &= 111 \\ y &= 37 \end{aligned}$$

They make
a linc.
Add up to
180

Work

$\begin{aligned} 4x &= 112 \\ \frac{4x}{4} & \\ x &= 28 \end{aligned}$	$y = 112$ $\begin{aligned} &\text{Corresponding} \\ &\text{equal!!!} \end{aligned}$	$y = 112$ $\begin{aligned} &\text{same sect} \\ &\text{so } y = 112 \end{aligned}$	$y = 112$ $\begin{aligned} &\text{Alternate} \\ &\text{interior} \\ &\downarrow \\ &= \text{equal} \end{aligned}$
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Top Bottom

Line a is parallel to line b . Tell if each statement is true (T) or false (F).

$\angle 1$ and $\angle 10$ are alternate exterior angles. F

$\angle 8$ and $\angle 11$ are alternate interior angles. T

$\angle 2$ and $\angle 10$ are corresponding angles. T

$\angle 2$ and $\angle 7$ are alternate interior angles. F

$\angle 7$ and $\angle 15$ are corresponding angles. T

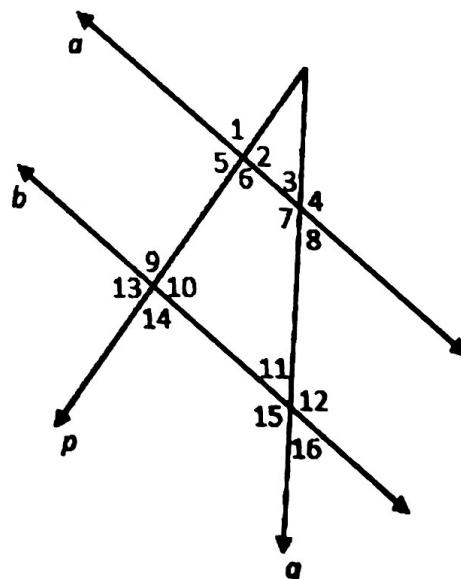
$\angle 5$ and $\angle 10$ are alternate interior angles. T

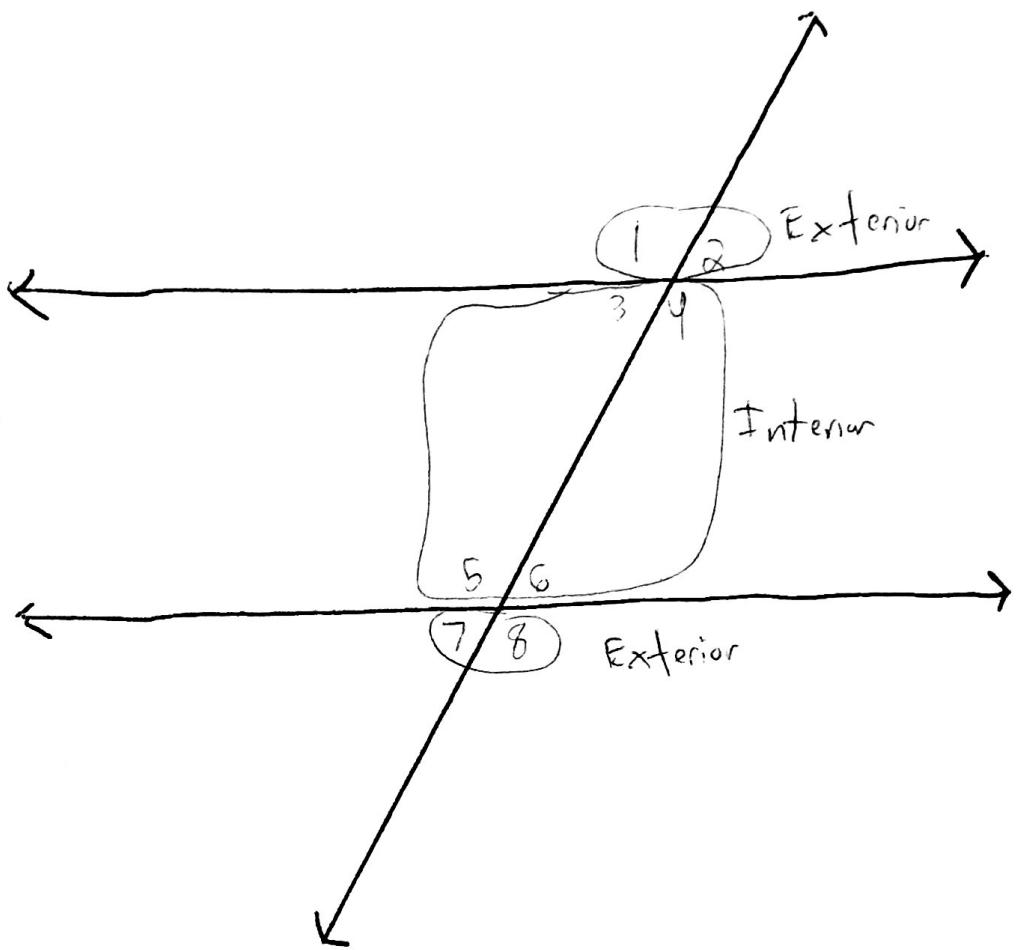
$\angle 7$ and $\angle 11$ are consecutive interior angles. T

$\angle 10$ and $\angle 14$ are consecutive interior angles. F

$\angle 1$ and $\angle 3$ are corresponding angles. F

$\angle 4$ and $\angle 15$ are alternate exterior angles. T





Corresponding - in the same spot but on the other intersection

Alternate interior - between the two parallel lines, but on opposite sides of the transversal

Alternate exterior - on the top & bottom (outside the parallel lines), but on opposite sides of the transversal

Consecutive interior - between the two parallel lines, on the same side of the transversal

Vertical angles - diagonally across, \cong