

## 1.2 Parallel Line Postulates

Tuesday, August 14, 2018 2:13 PM

You may need to refer back to the 1.0 notes for the names of the angles.

**When 2 Parallel Lines are intersected by a transversal then the:**

Alternate Interior Angles are  $\cong$  

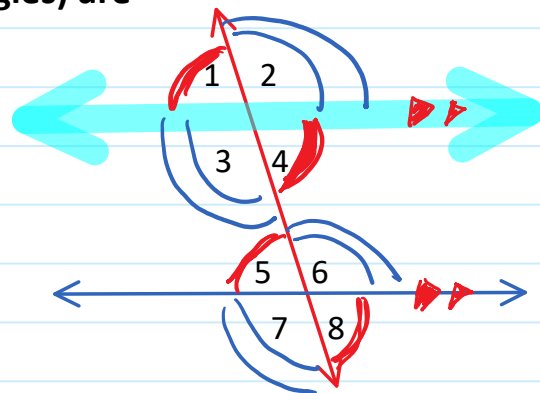
Alternate Exterior Angles are  $\cong$

Corresponding Angles are  $\cong$  

**And the:**

Same Side Interior Angles (Consecutive Interior Angles) are supplementary

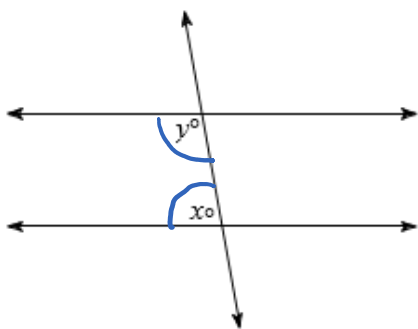
Same Side Exterior Angles are supplementary



The **Biggest decision** you will have to make is how they are related. They will either be **supplementary** or  $\cong$

[1-6] Identify each pair of angles as corresponding, alternate interior, alternate exterior, consecutive interior, vertical, or adjacent.

5. Consecutive Int. (Same-Side Int.)

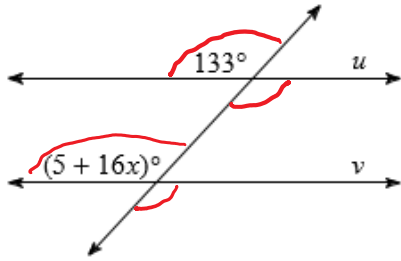


[14-17] Find the value of  $x$  that makes line  $u$  and  $v$  parallel.

14.

[17-17] Find the value of  $x$  that makes line  $u$  and  $v$  parallel.

14.



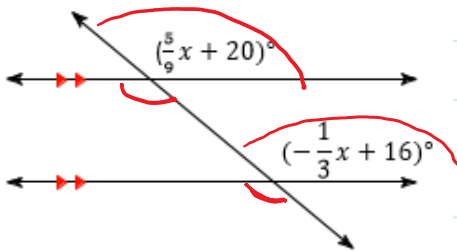
$$\begin{array}{r} 5 + 16x = 133 \\ 5 \qquad -5 \\ \hline \end{array}$$

$$\begin{array}{r} 16x = 128 \\ \frac{16}{16} \quad \frac{16}{16} \\ \hline \end{array}$$

$$\boxed{x = 8}$$

[9-12] Given the lines are parallel, find the value of  $x$ .

11.



$$\begin{array}{r} \frac{5}{9}x + 20 = -\frac{1}{3}x + 16 \\ +\frac{1}{3}x \qquad +\frac{1}{3}x \\ \hline \frac{8}{9}x + 20 = 16 \\ \qquad -20 \qquad -20 \\ \hline \end{array}$$

$$\frac{8}{9}x = -4 \cdot \frac{9}{8}$$

$$\boxed{x = -9/2}$$