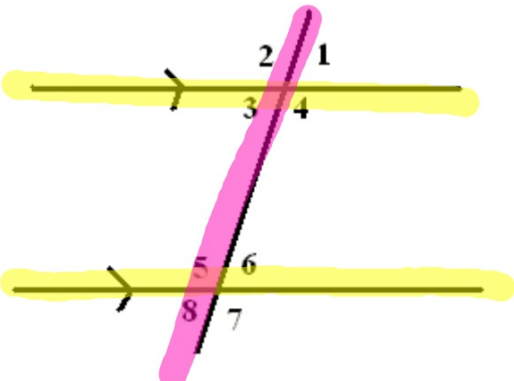
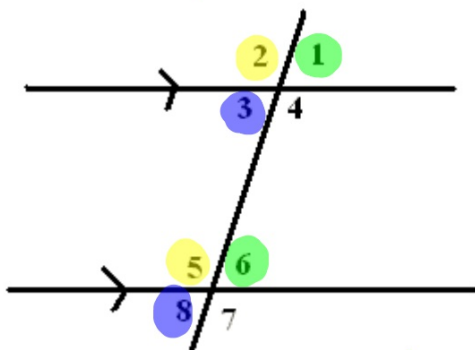
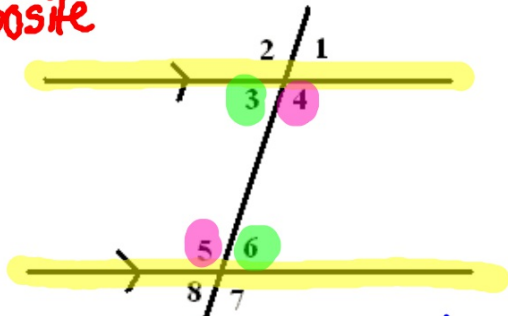


Guided Notes: Parallel Lines & Transversals

<p>Parallel Lines</p> <p>Transversal</p>  <p>The diagram shows two horizontal parallel lines intersected by a transversal line. The top line is highlighted in yellow. The transversal is highlighted in pink. At the intersection with the top line, the angles are numbered: 1 (top-right), 2 (top-left), 3 (bottom-left), and 4 (bottom-right). At the intersection with the bottom line, the angles are numbered: 5 (top-left), 6 (top-right), 7 (bottom-right), and 8 (bottom-left). Arrows on the parallel lines indicate they are parallel.</p>	<p>Corresponding Angles - angles in the same position on different parallel lines</p>  <p>The diagram shows two horizontal parallel lines intersected by a transversal line. At the top intersection, angle 2 is highlighted in yellow and angle 1 is highlighted in green. At the bottom intersection, angle 5 is highlighted in yellow and angle 6 is highlighted in green. Angles 3 and 8 are highlighted in blue. Arrows on the parallel lines indicate they are parallel.</p> <p><i>* Congruent</i></p>
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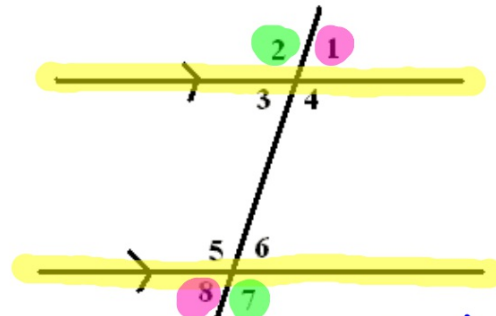
Alternate Interior Angles - angles between the parallel lines and on different sides of the transversal

Opposite



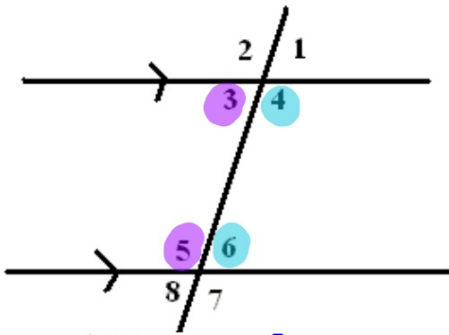
** Congruent*

Alternate Exterior Angles - angles outside the parallel lines and on different sides of the transversal



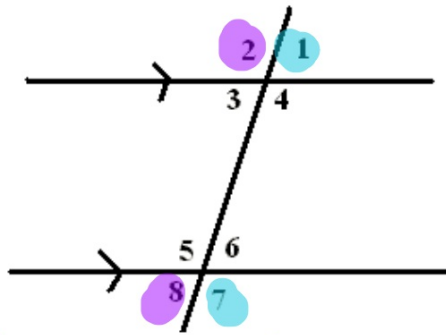
** Congruent*

Same-Side Interior Angles - angles between the parallel lines and on the same side of the transversal



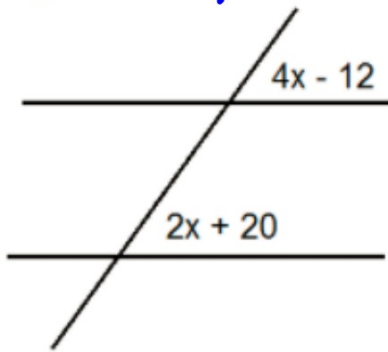
** Supplementary - 180°*

Same-Side Exterior Angles - angles outside the parallel lines and on the same side of the transversal



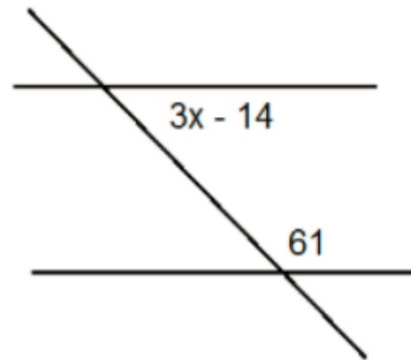
** Supplementary*

EX1. Corresponding



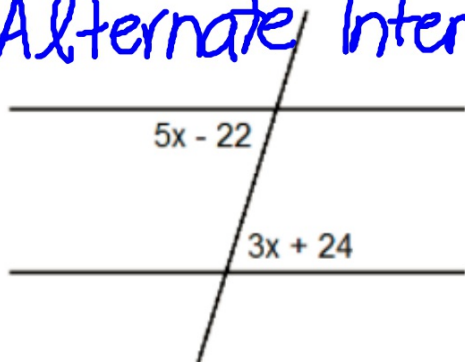
$$\begin{array}{r} 4x - 12 = 2x + 20 \\ -2x \quad -2x \\ \hline 2x - 12 = 20 \\ +12 \quad +12 \\ \hline 2x = 32 \\ \frac{2x}{2} = \frac{32}{2} \\ \hline X = 16 \end{array}$$

EX2. Same-Side Interior



$$\begin{array}{r} 3x - 14 + 61 = 180 \\ 3x + 47 = 180 \\ -47 \quad -47 \\ \hline 3x = 133 \\ \frac{3x}{3} = \frac{133}{3} \\ \hline X = 44.\bar{3} \end{array}$$

EX3. Alternate Interior



$$\begin{array}{r} 5x - 22 = 3x + 24 \\ -3x \quad -3x \\ \hline \end{array}$$

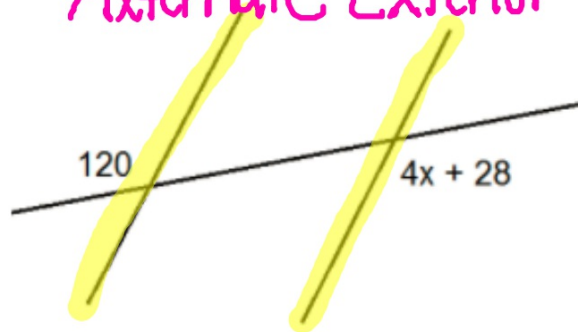
$$\begin{array}{r} 2x - 22 = 24 \\ +22 \quad +22 \\ \hline \end{array}$$

$$\frac{2x}{2} = \frac{46}{2}$$

$$x = 23$$

EX4.

Alternate Exterior



$$\begin{array}{r} 120 = 4x + 28 \\ -28 \quad -28 \\ \hline \end{array}$$

$$\frac{92}{4} = \frac{4x}{4}$$

$$x = 23$$

Homework is on Page 7.5 in Packet