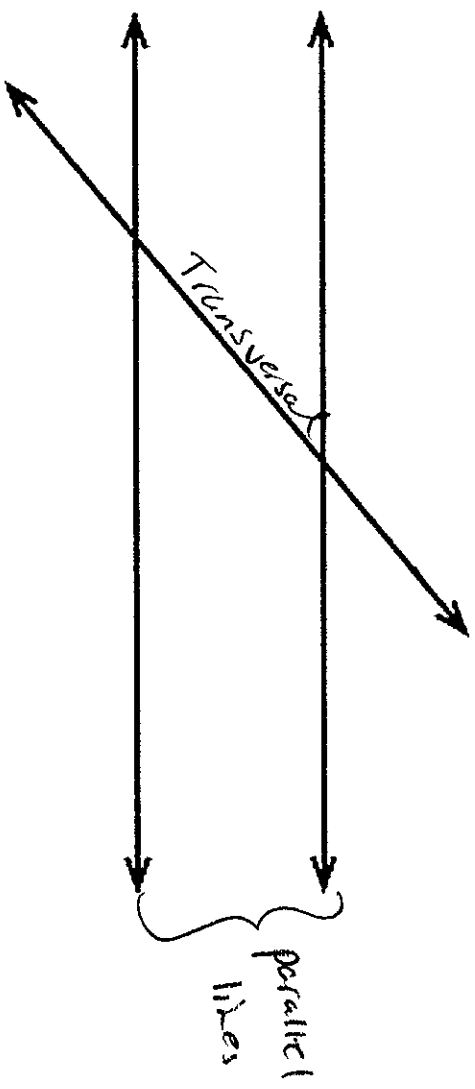


Name Key
Mrs. Rumbos

Date _____
8R Period _____

Parallel Lines and Angles



Types of Lines

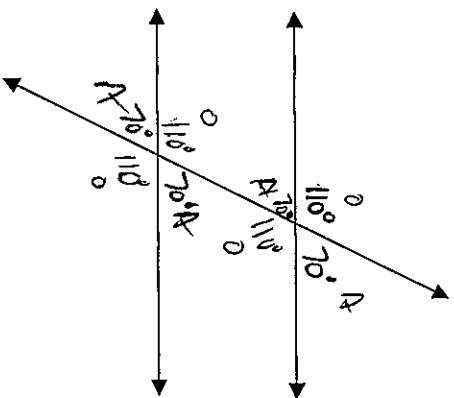
- Parallel Lines - Lines that do NOT intersect.
- Perpendicular Lines - Lines that intersect to form a right angle.
- Transversal - A line that intersects two lines at different points.

Types of Angles

Angle Name	Examples	
<p>Vertical Angles - Two angles that are <u>opposite</u> each other. They are <u>equal</u> in measure.</p>	$\angle 1 \cong \angle 4$ $\angle 5 \cong \angle 8$ $\angle 2 \cong \angle 3$ $\angle 6 \cong \angle 7$	
<p>Supplementary Angles/Linear Pair - Two angles that are <u>next to</u> each other and form a line. The sum = <u>180°</u></p>	$\angle 1 + \angle 2 = 180$ $\angle 5 + \angle 6 = 180$ $\angle 2 + \angle 4 = 180$ $\angle 6 + \angle 8 = 180$ $\angle 4 + \angle 3 = 180$ $\angle 8 + \angle 7 = 180$ $\angle 3 + \angle 1 = 180$ $\angle 7 + \angle 5 = 180$	
<p>Corresponding Angles - Two angles that occupy the <u>same position</u>. They are <u>equal</u> in measure.</p>	$\angle 1 \cong \angle 5$ $\angle 3 \cong \angle 7$ $\angle 2 \cong \angle 6$ $\angle 4 \cong \angle 8$	
<p>Alternate Interior Angles - Two angles that lie <u>inside</u> the parallel lines on <u>opposite</u> sides of the transversal. They are <u>equal</u> in measure.</p>	$\angle 3 \cong \angle 6$ $\angle 4 \cong \angle 5$	
<p>Alternate Exterior Angles - Two angles that lie <u>outside</u> the parallel lines on <u>opposite</u> sides of the transversal. They are <u>equal</u> in measure.</p>	$\angle 2 \cong \angle 7$ $\angle 1 \cong \angle 8$	
<p>Consecutive Interior Angles - Two angles that lie inside the parallel lines on the <u>same</u> sides of the transversal. The sum = <u>180°</u></p>	$\angle 3 + \angle 5 = 180$ $\angle 4 + \angle 6 = 180$	

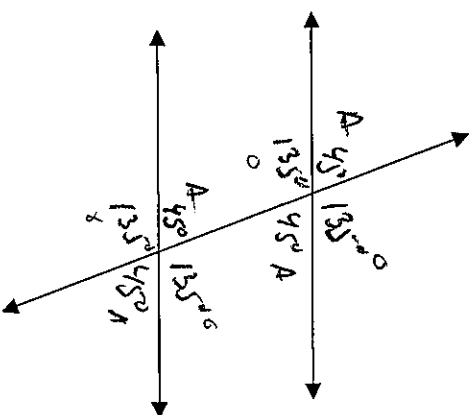
Examples: Solve for the missing angles. Use the given angle to start.

1)



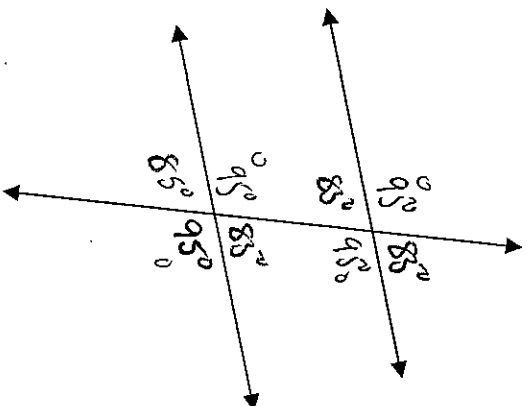
$$\begin{array}{r} 180 \\ -110 \\ \hline 70 \end{array}$$

2)



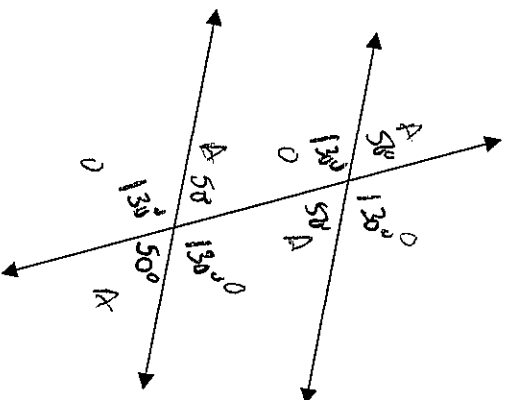
$$\begin{array}{r} 180 \\ -45 \\ \hline 135 \end{array}$$

3)



$$\begin{array}{r} 180 \\ -95 \\ \hline 85 \end{array}$$

4)



$$\begin{array}{r} 180 \\ -58 \\ \hline 130 \end{array}$$