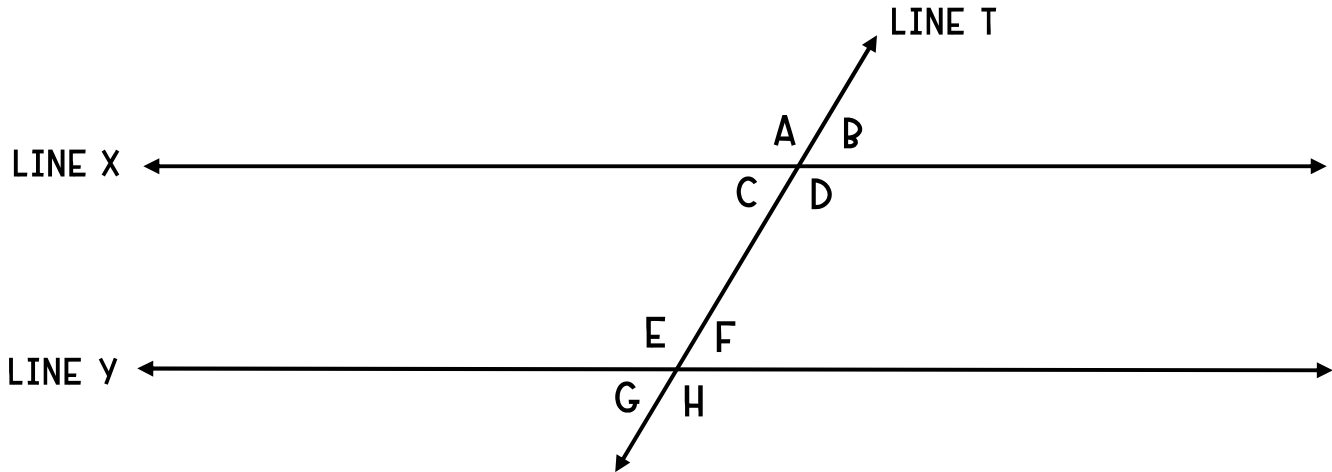


PARALLEL LINES AND TRANSVERSALS

In the picture below, lines X and Y are _____ lines, and line T is a _____, or a line that intersects them. Use a protractor to measure each of the 8 angles that were formed.

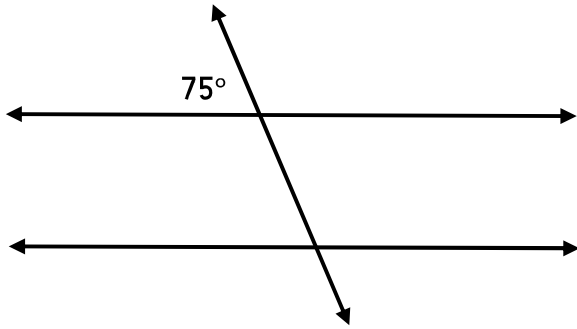


What do you notice about the angle measures? List which angles have the same measure.

Several types of angle pairs are created when parallel lines are cut by a transversal. Use the picture above to help you complete the table of angle pairs below.

	DEFINITION	EXAMPLES	RELATIONSHIP
CORRESPONDING ANGLES	Angles in the same relative position; angles in "_____"		
VERTICAL ANGLES	Pairs of _____ angles formed by _____ lines.		
LINEAR PAIR	Adjacent angles formed by intersecting lines that add up to _____.		
ALTERNATE INTERIOR ANGLES	Angles _____ the parallel lines and on opposite sides of the _____.		
ALTERNATE EXTERIOR ANGLES	Angles _____ the parallel lines and on opposite sides of the _____.		
SAME SIDE INTERIOR ANGLES	Angles _____ the parallel lines and on the same side of the _____.		
SAME SIDE EXTERIOR ANGLES	Angles _____ the parallel lines and on the same side of the _____.		

Use what you know about parallel lines and transversals to label each of the missing angle measures in the picture below:



*Notice that when parallel lines are crossed by a transversal, any pair of the angles formed will either be _____ or _____.

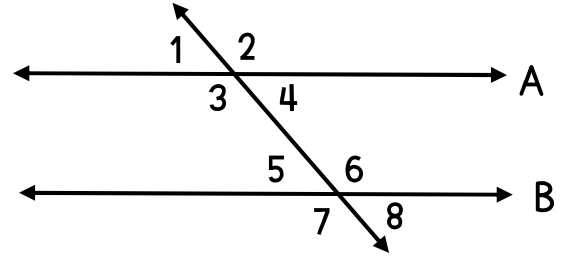
Practice finding missing angles below. Be sure to justify your answers using specific vocabulary.

QUESTIONS 1 & 2	Line R is parallel to Line S. The $m\angle 2 = 55^\circ$.	1. Find the measure of $\angle 3$. How do you know?
		2. Find the measure of $\angle 7$. How do you know?
QUESTIONS 3 & 4	Line J is parallel to Line K. The $m\angle 5 = 102^\circ$.	3. Find the measure of $\angle 4$. How do you know?
		4. Find the measure of $\angle 1$. How do you know?
QUESTION 5	<p>5. Use the picture from questions 3-4 to mark the following statements as true or false. Correct any false statements in the space on the right.</p> <p>_____ $\angle 2$ and $\angle 8$ are corresponding angles.</p> <p>_____ $\angle 3$ and $\angle 5$ are congruent angles.</p> <p>_____ $\angle 1$ and $\angle 8$ are alternate interior angles.</p> <p>_____ $\angle 5$ and $\angle 8$ are vertical angles.</p> <p>_____ $\angle 1$ and $\angle 7$ are supplementary angles.</p>	

Summarize today's lesson:

PARALLEL LINES AND TRANSVERSALS

Lines A and B are parallel lines cut by a transversal. Use the lines and the angles formed to answer the questions below.



<p>1. Angle 3 and Angle 6 are examples of which type of angle pair?</p> <p>A. Alternate interior angles B. Same side interior angles C. Vertical angles D. Corresponding angles</p>	<p>2. Angle 1 and Angle 5 are examples of which type of angle pair?</p> <p>A. Same side exterior angles B. Alternate interior angles C. Vertical angles D. Corresponding angles</p>	<p>3. Angle 6 and Angle 7 are examples of which type of angle pair?</p> <p>A. Alternate exterior angles B. Same side interior angles C. Vertical angles D. Corresponding angles</p>
<p>4. Which of the following angles would not be congruent to the measure of $\angle 7$?</p> <p>A. $\angle 2$ B. $\angle 3$ C. $\angle 6$ D. $\angle 8$</p>	<p>5. Which of the following is an example of corresponding angles?</p> <p>A. $\angle 8$ and $\angle 4$ B. $\angle 5$ and $\angle 7$ C. $\angle 1$ and $\angle 7$ D. $\angle 3$ and $\angle 5$</p>	<p>6. Which of the following is not an example of supplementary angles?</p> <p>A. $\angle 7$ and $\angle 8$ B. $\angle 2$ and $\angle 3$ C. $\angle 1$ and $\angle 7$ D. $\angle 6$ and $\angle 4$</p>
<p>7. If the $m\angle 7 = 115^\circ$, find the measure of $\angle 2$.</p> <p>_____</p>	<p>8. If the $m\angle 5$ is 63°, find the measure of $\angle 3$.</p> <p>_____</p>	<p>9. If the $m\angle 1$ is 57°, find the measure of $\angle 6$.</p> <p>_____</p>

10. Alejandro drew two parallel lines cut by a transversal. He measured two of the angles and found that both measured 86° . Circle the name of any student who made a true statement about the two angles.

ABIGAIL

The two angles must be on opposite sides of the transversal.

MALIK

The two angles could be corresponding angles.

FLETCHER

The two angles could be a linear pair.