Parallel Lines Cut by a Transversal Notes
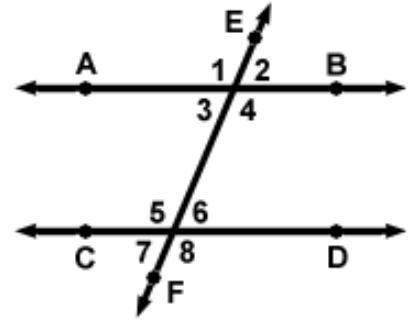
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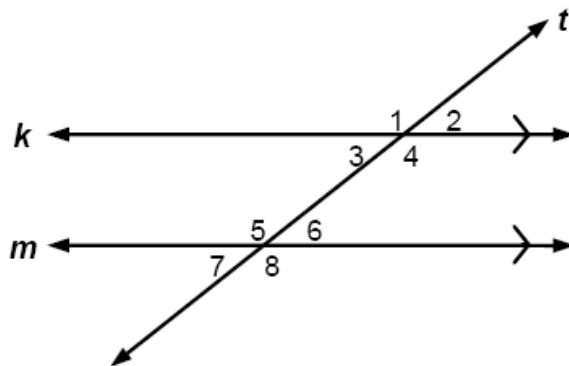
Vocabulary	Definition	In the Diagram Above
Transversal	a line intersecting two or more other lines	
Corresponding Angles	any pair of angles that have the same relative position at each intersection where a straight line crosses two others	
Alternate Interior Angles	Nonadjacent interior angles that lie on opposite sides of the transversal	
Alternate Exterior Angles	Nonadjacent exterior angles that lie on opposite sides of the transversal	
Same Side Interior Angles	Lie on the same side of the transversal between the other two lines	

Use the following figure for each example problems below.

$\overline{AB}$ and $\overline{CD}$ are parallel. The figure is not drawn to scale.

Example 1: $m \angle 1 = 105°$, find the $m \angle 5$.

Example 2: $m \angle 4 = 4x$ and $m \angle 5$ is $3x + 5$. Find the value of x and the measure of $\angle 4$ and $\angle 5$.

**Pause the video and try these on your own!
Then press play and check your answers with a color pen**

1) From the diagram above, name two pairs of corresponding angles. _____

2) From the diagram above, name the alternate interior angles. _____

3) From the diagram above, name the alternate exterior angles. _____

4) From the diagram above, name the same side interior angles. _____

5) Given the $m \angle 7 = 70°$. Find the measure of as many of the other angles as possible.

6) Given the $m \angle 3 = 2x + 1$ and $m \angle 1$ is $4x - 1$. Find the value of x.

7)) Given the $m \angle 4 = 134$ and $m \angle 5$ is $4x - 2$. Find the value of x.