

Name: \_\_\_\_\_

Hour: \_\_\_\_\_

## WHAT'S YOUR ANGLE?

1. Using your ruler, draw a line that intersects both parallel lines. (Tip: It will be best that your line is slanted; *not* perpendicular to the parallels.) Once you have drawn your line, use your compass to measure all of the angles formed by your line with the parallel lines.

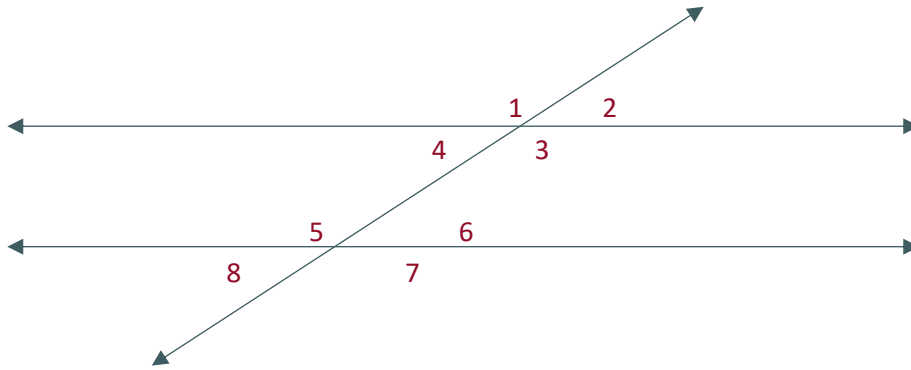


1. To refer to the angles, label them angle 1, angle 2, etc., starting with the top left angle, top right angle, bottom right, and bottom left (going clockwise) on the first line. Continue numbering in this manner for both lines. How many angles were created when you drew your line?
2. Are all of the measures of the angles the same or different? How many different measurements are there?
3. List all of the angles that are congruent.
4. How would you describe the relationship between angles 1 and 2?

For questions 5-8, look at the **entire picture** when describing relationships! Are the angles inside the parallel lines? Are the angles on the same side of a line?

5. How would you describe the relationship between angles 4 and 6?
  - a. What other angles have this exact same relationship?
6. How would you describe the relationship between angles 4 and 5?
  - a. What other angles have this exact same relationship?
7. How would you describe the relationship between angles 1 and 7?
  - a. What other angles have this exact same relationship?
8. How would you describe the relationship between angles 3 and 7?
  - a. What other angles have this exact same relationship?

KEY



1. In order to refer to the angles, label them angle 1, angle 2, etc. starting with the top left angle, top right angle, bottom right, and bottom left on the first line. Continue numbering in this manner for both lines. How many angles were created when you drew in your line? **8**
2. Are all of the measures of the angles the same or different? How many different measures are there? **Some are the same, some are different. There are only 2 different measurements.**
3. List all of the angles that are congruent.  
**1, 3, 5, & 7**  
**2, 4, 6, & 8**
4. How would you describe the relationship between angle 1 and angle 2?  
**Linear pair**
5. Between angles 4 and 6?  
**They are on opposite sides of the transversal and both on the inside of the parallel lines.**
  - a. What other angles have this exact same relationship?  
**Angle 3 and 5**
6. Between angles 4 and 5?  
**They are on the same side of the transversal and both on the inside of the parallel lines.**
  - a. What other angles have this exact same relationship?  
**Angle 3 and 6**
7. Between angles 1 and 7?  
**They are on opposite sides of the transversal and both angles are on the outside of the parallel lines.**
  - a. What other angles have this exact same relationship?  
**Angles 2 and 8**
8. Between angles 3 and 7?  
**They are on the same side of the transversal with one angle on the outside and one angle on the inside.**
  - a. What other angles have this exact same relationship?  
**Angles 4 and 8, angles 5 and 1, angles 6 and 2**