

# REVIEW: Parallel Lines and Transversals

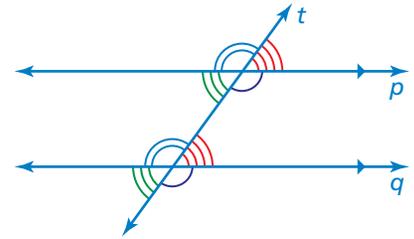
Name \_\_\_\_\_

## Key Concept and Vocabulary

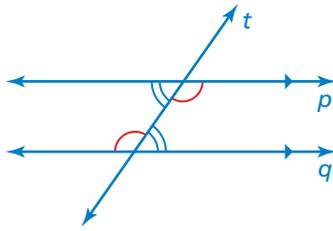
A line that intersects two or more lines is called a **transversal**.

When a transversal intersects parallel lines, corresponding angles are congruent. Corresponding angles lie on the same side of the transversal in corresponding positions.

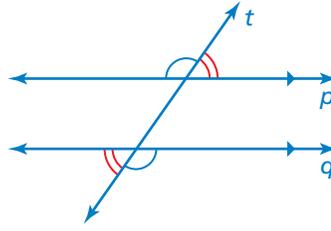
When a transversal intersects parallel lines, alternate interior angles are congruent and alternate exterior angles are congruent.



Corresponding angles



Alternate interior angles



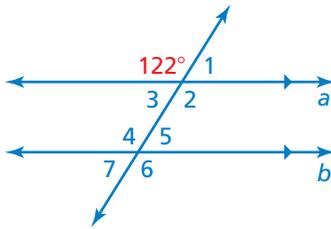
Alternate exterior angles

Congruent Angles



## Skill Example

1.



$\angle 6$ :  $\angle 6$  and the  $122^\circ$  angle are alternate exterior angles.

They are congruent. So, the measure of  $\angle 6$  is  $122^\circ$ .

$\angle 3$ :  $\angle 3$  and the  $122^\circ$  angle are supplementary angles.

So, the measure of  $\angle 3$  is  $180^\circ - 122^\circ = 58^\circ$ .

$\angle 5$ :  $\angle 5$  and  $\angle 3$  are alternate interior angles.

They are congruent. So, the measure of  $\angle 5$  is  $58^\circ$ .

$\angle 1$ ,  $\angle 2$ ,  $\angle 4$ , and  $\angle 7$ : Using corresponding angles, the measures of  $\angle 1$  and  $\angle 7$  are  $58^\circ$ , and the measures of  $\angle 2$  and  $\angle 4$  are  $122^\circ$ .

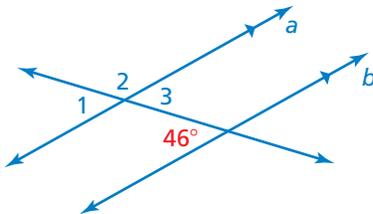


## PRACTICE MAKES PURR-FECT™

Check your answers at [BigIdeasMath.com](http://BigIdeasMath.com).

Use the given angle to find the measures of the numbered angles. Explain your reasoning.

2.

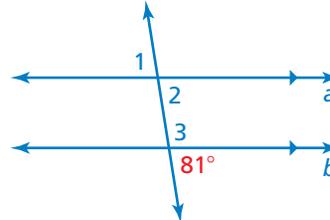


$\angle 1$ : \_\_\_\_\_

$\angle 2$ : \_\_\_\_\_

$\angle 3$ : \_\_\_\_\_

3.



$\angle 1$ : \_\_\_\_\_

$\angle 2$ : \_\_\_\_\_

$\angle 3$ : \_\_\_\_\_