

# Assignment

## Write

If a conditional statement is true, can you assume the converse is also true?  
Use examples to justify your reasoning.

## Remember

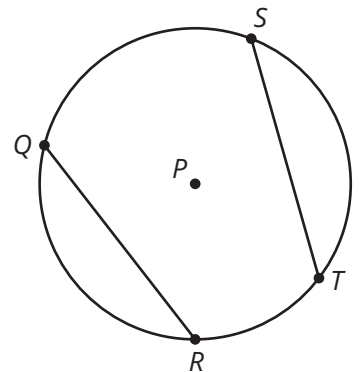
The converse of a conditional statement and is formed by interchanging the hypothesis and conclusion of the conditional statement. When a conditional statement and its converse are both true, this is called a biconditional statement.

## Practice

- Write a conjecture about the geometric objects in each part. Then write the converse of the conjecture. Draw examples to test each conjecture.
  - base angles of an isosceles triangle and their opposite sides
  - the interior angles of a triangle
  - corresponding angles and alternate interior angles
  - the side lengths of a triangle
- Draw examples of triangle midsegments. What conjecture can you make about the midsegment of a triangle?

## Stretch

- Consider the circle with center  $P$ . Chords  $QR$  and  $ST$  are congruent. Draw  $\triangle QPR$  and  $\triangle SPT$ .
  - Is  $\triangle QPR$  congruent to  $\triangle SPT$ ? Explain your reasoning.
  - Draw the altitude of each triangle. How do the two altitudes compare? Explain your reasoning.
  - Write a conjecture about the distance of congruent chords from the center of the circle. Then write the converse of the conjecture.



## Review

1. State as many properties as you can about a kite.
2. State as many properties as you can about a rectangle.
3. Determine whether the triangles are congruent. If so, write a statement of triangle congruence.

