

Assignment

Write

Match each term with the best description.

- | | |
|------------------------|---|
| 1. secant | a. a presumption that something is true or false |
| 2. major arc | b. a line that intersects a circle at exactly one point |
| 3. minor arc | c. an angle that has two sides tangent to a circle |
| 4. conjecture | d. an angle with a vertex that is on a circle and sides that contain chords of the circle |
| 5. inscribed angle | e. the arc with the greater measure |
| 6. intercepted arc | f. a mathematical statement that cannot be proven but is considered true |
| 7. tangent | g. a statement that can be proven |
| 8. circumscribed angle | h. a line that passes through two points on a circle |
| 9. theorem | i. the arc of a circle with endpoints that are intersected by two rays of an angle |
| 10. postulate | j. the arc with the lesser measure |

Remember

Circles can be helpful in constructing geometric figures in order to make conjectures about line and angle relationships.

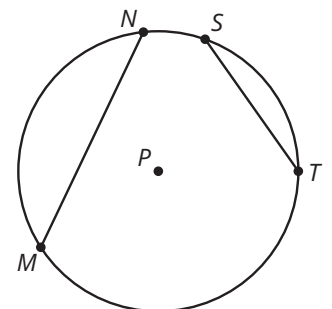
When you conjecture, you use what you know through experience and reasoning to presume that something is true. The proven statement of a conjecture is called a theorem.

Practice

- Write a conjecture about each geometric object described. Draw examples to test your conjecture.
 - Vertical angles
 - Points on the perpendicular bisector of a line segment
 - Inscribed angles that intercept the same arc of a circle
 - Tangent
- Draw examples of inscribed angles that intercept the diameter of the circle. What conjecture can you make about the measure of the inscribed angle?

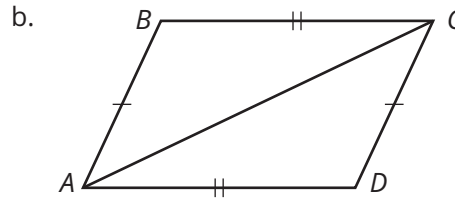
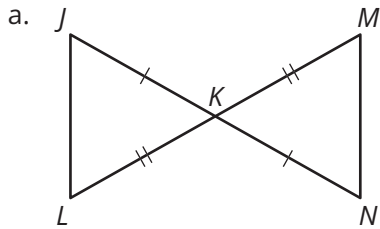
Stretch

Consider the circle with a center at point P . Construct the perpendicular bisectors of chord MN and chord ST . Then make a conjecture about the perpendicular bisectors of chords in a circle.



Review

1. Determine whether the pair of triangles in each diagram are congruent. If so, write a statement of triangle congruence.



2. Determine each unknown measure in the figure.
Explain your reasoning.

