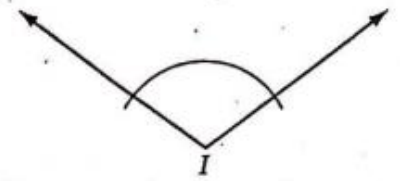
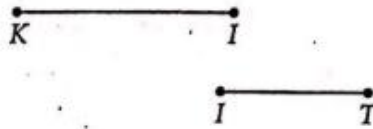


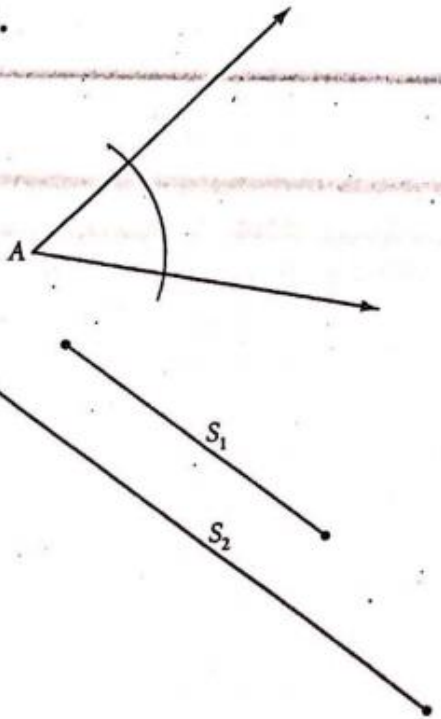
### Section 3.6/3.8/3.9 worksheet

1. Construct kite *KITE* using these parts.



Construct a triangle using the given parts. Is it **UNIQUE**? (Is it the only triangle that could have been constructed?)

6.



**Make a sketch and explain how to find the answer.**

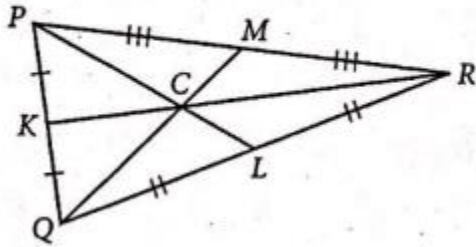
1. A circular revolving sprinkler needs to be set up to water every part of a triangular garden. Where should the sprinkler be located so that it reaches all of the garden, but doesn't spray farther than necessary?

3. Draw an obtuse triangle. Construct the inscribed and the circumscribed circles.

4. Construct an equilateral triangle. Construct the inscribed and the circumscribed circles. How does this construction differ from Exercise 3?

1. Draw a large acute triangle. Construct the centroid.

5.  $PL = 24$ ,  $QC = 10$ , and  $KC = 7$ . Find  $PC$ ,  $CL$ ,  $QM$ , and  $CR$ .



6. Identify each statement as describing the incenter, circumcenter, orthocenter, or centroid.
- \_\_\_\_\_ The point equally distant from the three sides of a triangle.
  - \_\_\_\_\_ The center of gravity of a thin metal triangle.
  - \_\_\_\_\_ The point equidistant from the three vertices.
  - \_\_\_\_\_ The intersection of the perpendicular bisectors of the sides of a triangle.
  - \_\_\_\_\_ The intersection of the altitudes of a triangle.
  - \_\_\_\_\_ The intersection of the angle bisectors of a triangle.
  - \_\_\_\_\_ The intersection of the medians of a triangle.