

## Self-Test 2

1. Draw a large  $\odot O$ . Choose a point  $A$  that is outside  $\odot O$ . Construct the two tangents to  $\odot O$  from point  $A$ .
2. Draw a very large obtuse triangle. Construct the inscribed circle.
3. Draw a segment about half as long as the width of your paper. Then divide the segment by construction into two segments whose lengths have the ratio 2:1.
4. Draw a large  $\triangle ABC$ . Then construct  $\overline{DE}$  such that  $\frac{AB}{BC} = \frac{AC}{DE}$ .
5. Use  $\triangle ABC$  drawn in Exercise 4 to construct a segment,  $\overline{PQ}$ , whose length is the geometric mean of  $AB$  and  $AC$ .
6. You are given  $\odot S$  and diameter  $\overline{FG}$ . To construct parallel tangents to  $\odot S$ , you could construct a line that is  $\perp$  to  $\overline{FG}$  at  $\perp$  and a line that is  $\perp$  to  $\overline{FG}$  at  $\perp$ .
7. You are given  $\triangle TRI$ . Describe the steps you would use to circumscribe a circle about  $\triangle TRI$ .

## Locus

### Objectives

1. Describe the locus that satisfies a given condition.
2. Describe the locus that satisfies more than one given condition.
3. Apply the concept of locus in the solution of construction exercises.

## 10-6 The Meaning of Locus

A radar system is used to determine the position, or *locus*, of airplanes relative to an airport. In geometry *locus* means a figure that is the set of all points, and only those points, that satisfy one or more conditions.

