

**Five Fundamental Loci**  
**Do Work on Separate Sheet**

- 1) What is the locus of the outer end of the hour hand of a clock during a 12-hour period?
- 2) What is the locus of points equidistant from two parallel lines 8 meters apart?
- 3) What is the locus of points 5 yards away from the centerline on a soccer field?
- 4) What is the locus of points 3 inches from a given line?
- 3) What is the locus of points equidistant from two circles that have the same center and radii of 7 cm and 11 cm?
- 8) What is the locus of the center of a penny that is rolling around a quarter if the edges of the two coins are always touching each other?
- 4) A dime is rolled along a horizontal line so that the dime always touches the line. What is the locus of the center of the dime?
- 9) What is the locus of points in the exterior of a circle whose radius measures 3 inches if the points are 2 inches from the circle?
- 5) What is the locus of points that are 10 centimeters from a given point?
- 10) What is the locus of points equidistant from sides AB and CD in rectangle ABCD?
- 11) The locus of points at a given distance from a line is:
  - 1) a circle
  - 2) one line
  - 3) two parallel lines
  - 4) two intersecting lines
- 12) What is the locus of points in the interior of square ABCD and equidistant from  $\overline{AB}$  and  $\overline{BC}$ ?
  - 1) point D
  - 2) diagonal  $\overline{BD}$
  - 3) diagonal  $\overline{AC}$
  - 4) sides  $\overline{AD}$  and  $\overline{DC}$
- 13) If a side of square ABCD has length 10 centimeters, which points are 10 centimeters from vertex A?
  - 1) B, C
  - 2) C, D
  - 3) B, D
  - 4) B, C, D

