2. Draw two parallel lines k and l.
   a. Draw several points that are in the plane containing k and l and are equidistant from k and l.
   b. Draw all the points that are in the plane containing k and l and are equidistant from k and l.
   c. Describe the locus of points that are in the plane of two parallel lines and equidistant from them.
   d. Remove the restriction that the points must lie in the plane of the two lines. Now describe the locus.

3. Draw an angle.
   a. Draw several points in the plane of the angle that are equidistant from the sides of the angle.
   b. Draw all the points in the plane of the angle that are equidistant from the sides of the angle.
   c. Describe the locus of points in the plane of a given angle that are equidistant from the sides of the angle.

4. What is the locus of points in your classroom that are equidistant from the ceiling and floor?

5. What is the locus of points in your classroom that are 1 m from the floor?

6. Choose a point P on the floor of the classroom.
   a. What is the locus of points, on the floor, that are 1 m from P?
   b. What is the locus of points, in the room, that are 1 m from P?

7. What is the locus of points in your classroom that are equidistant from the ceiling and floor and are also equidistant from two opposite side walls?

8. What is the locus of points in your classroom that are equidistant from the front and back walls and are also equidistant from the two side walls?

9. Describe the locus of points on a football field that are equidistant from the two goal lines.

10. Draw a circle with radius 6 cm. Use the following definition of *distance from a circle*: A point P is x cm from a circle if there is a point of the circle that is x cm from P but there is no point of the circle that is less than x cm from P.
   a. Draw all the points in the plane of the circle that are 2 cm from the circle.
   b. Complete: Given a circle with a 6 cm radius, the locus of all points in the plane of the circle and 2 cm from the circle is ___?___.
   c. Remove the restriction that the points must lie in the plane of the circle. Now describe the locus.

11. Make up a locus problem for which the locus contains exactly one point.

12. Make up a locus problem for which the locus doesn't contain any points.