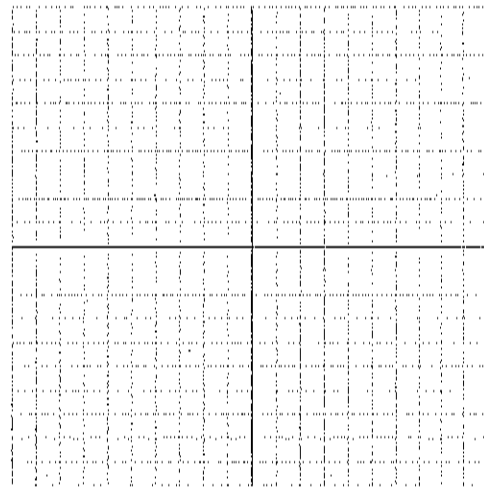
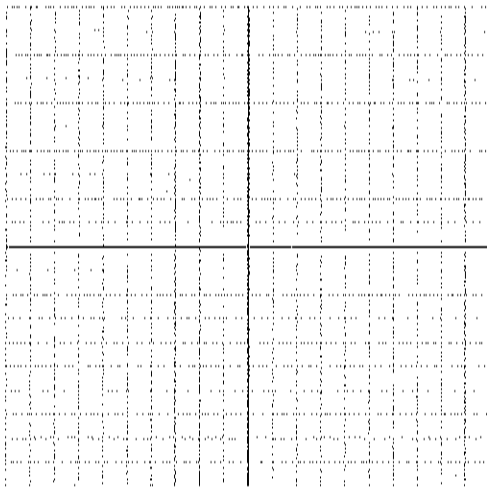


Coordinate Compound Loci Do Work on Separate Sheet

Answer each of the following. Be sure to include a sketch as part of your answer.

- 1) How many points are equidistant from points A and B and also 4 inches from \overline{AB} ?
1) 1 2) 2 3) 3 4) 4
- 2) How many points are equidistant from two intersecting lines and also 3 inches from the point of intersection of the lines?
1) 1 2) 2 3) 3 4) 4
- 3) How many points are 4 units from the origin and also 4 units from the x-axis?
4) How many points are equidistant from points P(2, 1) and Q(2, 5) and also 3 units from the origin?

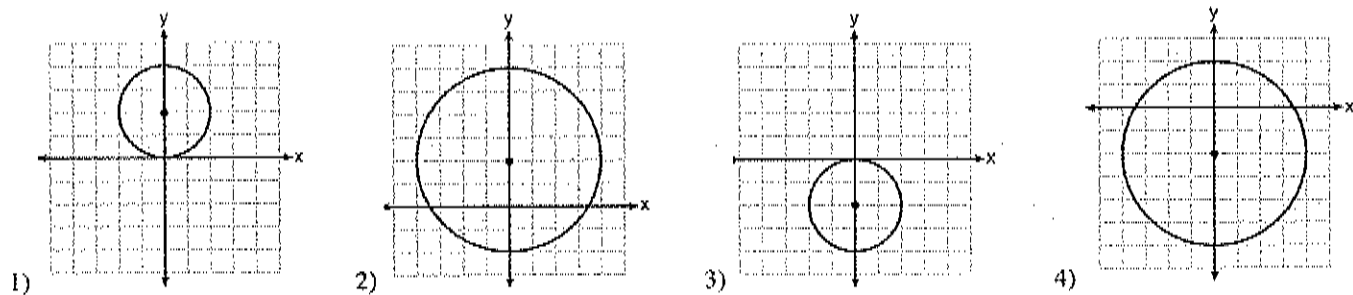


- 5) The distance between points P and Q is 9 inches. How many points are equidistant from P and Q and also 4 inches from Q?
1) 1 2) 2
3) 0 4) 4
- 6) The distance between points P and Q is 8 inches. How many points are equidistant from P and Q and also 4 inches from P?
1) 1 2) 2
3) 0 4) 4

Continue with the work on the back



12) Which graph represents a circle whose equation is $x^2 + (y - 2)^2 = 4$?



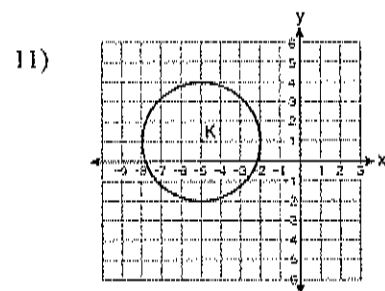
7) A tree is located 30 feet east of a fence that runs north to south. Kelly tells her brother Bob that their dog buried Bob's hat a distance of 15 feet from the fence and also 20 feet from the tree.

- Draw a sketch to show where Bob should dig to find his hat.
- How many locations for the hat are possible?

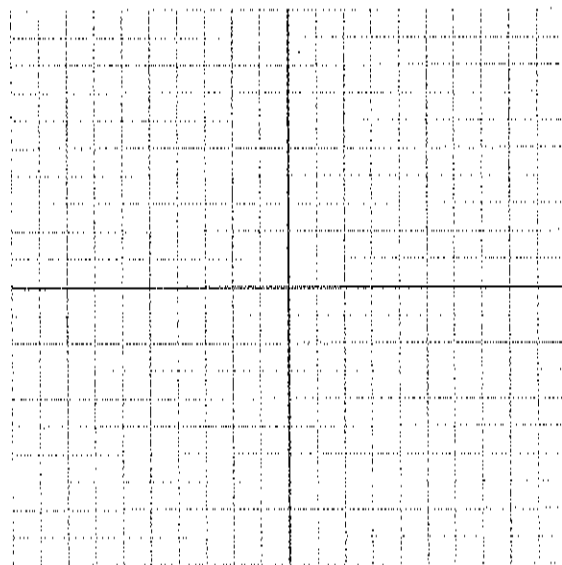
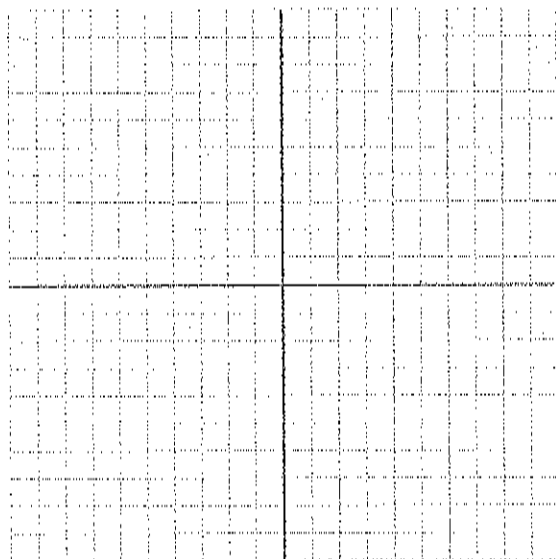
11) Which equation represents circle K in the graph to the right?

10) The center C and radius r of the circle whose equation is $(x - 4)^2 + (y - 2)^2 = 9$ are:

- $C: (-4, -2); r = 3$
- $C: (-4, -2); r = 9$
- $C: (4, 2); r = 3$
- $C: (4, 2); r = 9$



10) Dan is sketching a map of the location of his house and his friend Matthew's house on a set of coordinate axes. Dan locates his house at point $D(0,0)$ and locates Matthew's house, which is 6 miles east of Dan's house, at point $M(6,0)$, and an Arcade at $(-1, 8)$. Dan wants to meet Matt at a spot that is equidistant from the two houses and 5 miles from the arcade. Graph each loci and determine where they will meet.



11) A city is planning to build a new park. The park must be equidistant from school A at $(3, 3)$ and School B at $(3, -5)$. The park must also be exactly 5 miles from the center of town, which is located at the origin on the coordinate graph. Each unit on the graph represents one mile. On the set of axes, sketch the compound loci and label with an X all possible locations for the new park.