Name

12-2A Lesson Master

Questions on SPUR Objectives
See Student Edition pages 862–865 for objectives.

SKILLS Objective B

In 1–3, give an equation for the circle with the given characteristics.

1. center (0, 0); radius 9 _____
2. center (3.2, 5.7); radius 1.3 _____
3. center (a, b); diameter d _____

PROPERTIES Objective E

In 4 and 5, an equation for a circle is given. Find the center and radius.

4. $(x - 3)^2 + y^2 = 36$ center: _____ radius: _____
5. $(x - t)^2 + (y - n)^2 = p$ center: _____ radius: _____
6. Find the coordinates of all points on the circle

   $(x - 2)^2 + (y - 3)^2 = 12$, where $y = 0$. _____

PROPERTIES Objective F

In 7–9, determine whether the figure described is a parabola, a circle, or neither.

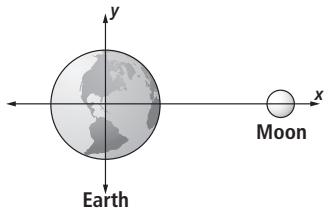
7. The set of all points 2 units from (8.1, 12.3). _____
8. The set of all points equidistant from (8.1, 12.3) and (4.2, 1.9). _____
9. The set of all points equidistant from (8.1, 12.3) and $y = 1.9$. _____

USES Objective G

10. Sol throws a rock into a pond. The ripples travel at 2 meters per second from the point where the rock hits the water. Using (0, 0) as the point where the rock hits, write an equation for the circle that represents a ripple three seconds after the rock hits the water.

    _____

11. Sally is making a scale drawing of Earth and its moon as shown at the right. She puts the center of Earth at the origin and uses a scale of 1 cm = 1000 km. (The picture at the right is NOT to scale.)



    a. The equatorial diameter of Earth is 12,756 km. Give an equation for the circle representing Earth.

    _____

    b. The diameter of Earth's moon is 3476 km, and its average distance from Earth (center to center) is 382,500 km. Give an equation for the circle representing Earth's moon.

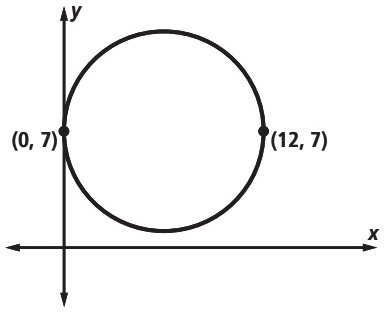
    _____

Name

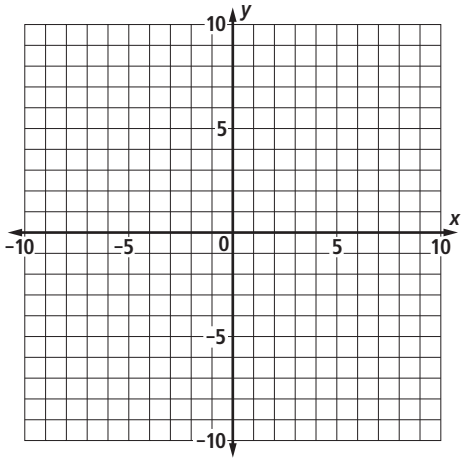
12-2A page 2

REPRESENTATIONS Objective I

12. Give an equation for the circle graphed at the right.

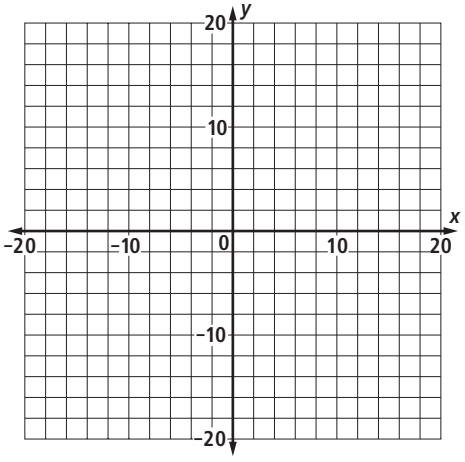


13. At the right, graph the circle $(x - 1)^2 + (y + 4)^2 = 25$.



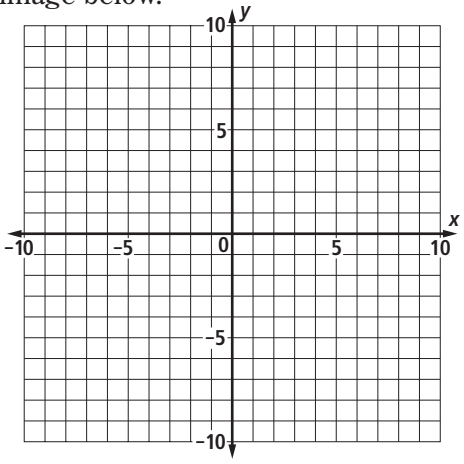
REPRESENTATIONS Objective L

14. Graph all points a distance of 12 from (6, 6) below.



15. The set of points 4 units from the origin is translated under $T_{5,-2}$.

a. Sketch a graph of the preimage and image below.



b. Give an equation for each set.