Geometry Chapter 11 Practice Test

Name _____

Consider the following equations of circles. Give the center and radius of each.

1. $(x - 5)^2 + (y - 2)^2 = 100$ Center = _____   Radius = _____

2. $(x - 1)^2 + (y + 7)^2 = 9$ Center = _____   Radius = _____

3. $(x - 1)^2 + (y + 17)^2 = 81$ Center = _____   Radius = _____

4. $x^2 + (y - 22)^2 = 4$ Center = _____   Radius = _____

5. $(x - 19)^2 + y^2 = 1$ Center = _____   Radius = _____

6. $(x - 2)^2 + (y + 12)^2 = 9$ Center = _____   Radius = _____

7. $(x - 1)^2 + (y - 1)^2 = 121$ Center = _____   Radius = _____

Give the equation of the circle that has the given center and given radius.

8.   Center = (20, 5)   Radius = 3   Equation = _____

9.   Center = (-1, 0)   Radius = 2   Equation = _____

10.   Center = (0, -3)   Radius = 5   Equation = _____

11.   Center = (-2, -7)   Radius = 11   Equation = _____

12.   Center = (5, -3)   Radius = 10   Equation = _____

13. If A = (-2, 4) and it is reflected over the y-axis, where will it land?   _____

14. If A = (0, 2) and it is reflected over the x-axis, where will it land?   _____

15. If A = (-1, -4) and it is reflected over the line y = 4, where will it land?   _____

16. If A = (-2, -5) and it is reflected over the line x = 2, where will it land?   _____

17. If A = (3, -6) and it is reflected over the line y = x, where will it land? _____

18. If A = (-4, 3) and it is reflected over the line y = -x, where will it land?   _____

19. Circle the shapes below that have both line symmetry and point symmetry.

        Circle   Rectangle   Isosceles Trapezoid   Square   Scalene Triangle

20. Give four points that must be on the line $(x - 2)^2 + (y + 1)^2 = 9$.   _____

Given the point and the translation, tell where the new point will be.

21.   Point = (-3, 2)   Translation = (x – 1, y + 5)   New Point = _____

22.   Point = (0, -5)   Translation = (x + 5, y – 2)   New Point = _____

23.   Point = (-3, -8)   Translation = (x, y + 3)   New Point = _____

24.   Point = (1, -5)   Translation = (x – 3, y)   New Point = _____

25.   What type of symmetry does a regular quadrilateral have? _____

26.   Which line of reflection maps point A at (-4, 4) to point A' at (4, -4)? _____

       A.) y = 4   B.) x = -4   C.) y = -4   D.) x = 4   E.) x-axis   F.) y = x   G.) y-axis

27.   The diameter of a circle has endpoints (-5, 3) and (5, -3).
       What is the length of the diameter of the circle? _____

_____ 28.   If the radius of a circle is doubled, how much larger is the area?

_____ 29.   If the radius of a circle is increased by 25%, how much larger is the area?

_____ 30.   If the radius of a circle is decreased by 20%, how much smaller is the area?

_____ 31.   If the radius of a sphere is tripled, how much larger is the volume?

_____ 32.   The volumes of two spheres are in a ratio of 27:125. What is the ratio of their radii?

_____ 33   The radius of Sphere A is increased by 30%.
                How much more volume will the new sphere hold than the old Sphere A?

_____ 34.   The ratio of the radii of two pizzas is 4:5. What is the ratio of the areas?

_____ 35.   The ratio of the area of two pizzas is 16:49. What is the ratio of the radii?

_____ 36.   The ratio of the radii of two spheres is 3:5. What is the ratio of the volumes?

_____ 37.   The ratio of the volume of two spheres is 27:512. What is the ratio of the
                lengths of the radii?

_____ 38.   The radius of a cylinder is doubled.
                How much larger is the volume of the cylinder?

_____ 39.   The height of a cone is multiplied by 5 and nothing is changed with the radius.
                What effect does that have on the volume of the cone?

_____ 40.   The radius and height of a cone is increased by 40%. How much larger will the volume be?