

# Geometry Chapter 11 Practice Test 1

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?