

11-3 Variations with Radius

Name _____

- _____ 1. If the radius of a circle is doubled, how much larger is the area?
- _____ 2. If the radius of a circle is doubled, how much larger is the circumference?
- _____ 3. If the radius of a circle is tripled, how much larger is the area?
- _____ 4. If the radius of a circle is increased by 20%, how much larger is the area?
- _____ 5. If the radius of a sphere is doubled, how much larger is the volume?
- _____ 6. If the radius of a circle is decreased by 20%, how much smaller is the area?
- _____ 7. If the radius of a circle is quadrupled, how much larger is the area?
- _____ 8. If the radius of a sphere is tripled, how much larger is the volume?
- _____ 9. If the radius of a circle is multiplied by 8, how much larger is the area?
- _____ 10. If the radius of a sphere is multiplied by 5, how much larger is the volume?
- _____ 11. If the radius of a circle is multiplied by 10, how much larger is the area?
- _____ 12. The volumes of two spheres are in a ratio of 8:125. What is the ratio of their radii?
- _____ 13. The radius of Sphere A is increased by 20%.
How much more volume will the new sphere hold than the old Sphere A?
- _____ 14. The ratio of the radii of two pizzas is 4:5. What is the ratio of the areas?
- _____ 15. The ratio of the area of two pizzas is 4:9. What is the ratio of the radii?
- _____ 16. The ratio of the radii of two pizzas is 9:10. What is the ratio of the areas?
- _____ 17. The volumes of two spheres are in a ratio of 1:8. What is the ratio of their radii?
- _____ 18. The ratio of the volume of two spheres is 27:64. What is the ratio of the lengths of the radii?
- _____ 19. The ratio of the radii of two spheres is 3:5. What is the ratio of the volumes?
- _____ 20. The ratio of the volume of two spheres is 125:512. What is the ratio of the lengths of the radii?

- _____ 21. The ratio of the areas of two circles is 9:25. What is the ratio of the lengths of the radii?
- _____ 22. The ratio of the areas of two circles is 4:81. What is the ratio of the lengths of the radii?
- _____ 23. The height and radius of a cone are each multiplied by 3. How much larger is the volume of the cone?
- _____ 24. If the radius of a circle is increased by 30%, how much larger is its area?
- _____ 25. If the radius of a circle is decreased by 20%, how much less is its area?
- _____ 26. The ratio of the areas of two circles is 16:25. What is the ratio of the lengths of the radii?
- _____ 27. The ratio of the areas of two circles is 4:27. What is the ratio of the lengths of the radii?
- _____ 28. The ratio of the areas of two circles is 1:4. What is the ratio of the lengths of the radii?
- _____ 29. If the radius of a circle is increased by 50%, how much larger is its area?
- _____ 30. The height and radius of a cone are each multiplied by 5. How much larger is the volume of the cone?
- _____ 31. The ratio of the areas of two circles is 9:121. What is the ratio of the lengths of the radii?
- _____ 32. The ratio of the radii of two spheres is 5:6. What is the ratio of the volumes?
- _____ 33. The ratio of the areas of two circles is 1:25. What is the ratio of the lengths of the radii?
- _____ 34. The height of a cone is multiplied by 4 and nothing is changed with the radius. What effect does that have on the volume of the cone?
- _____ 35. The radius of a sphere is doubled. How much larger is the surface area of the sphere?