

16.

Simplify the following:

1. $\sqrt{4}$ 2. $\sqrt{9}$ 3. $\sqrt{16}$ 4. $\sqrt{25}$ 5. $\sqrt{36}$ 6. $\sqrt{49}$ 7. $\sqrt{64}$ 8. $\sqrt{81}$ 9. $\sqrt{100}$
 (2) (3) (4) (5) (6) (7) (8) (9) (10)

10. $\sqrt{8}$ 11. $\sqrt{12}$ 12. $\sqrt{18}$ 13. $\sqrt{20}$ 14. $\sqrt{24}$ 15. $\sqrt{28}$ 16. $\sqrt{32}$
 (2 $\sqrt{2}$) (2 $\sqrt{3}$) (3 $\sqrt{2}$) (2 $\sqrt{5}$) (2 $\sqrt{6}$) (2 $\sqrt{7}$) (4 $\sqrt{2}$)

17. $\sqrt{44}$ 18. $\sqrt{48}$ 19. $\sqrt{50}$ 20. $\sqrt{54}$ 22. $\sqrt{56}$ 23. $\sqrt{60}$ 24. $\sqrt{63}$ 25. $\sqrt{72}$
 (2 $\sqrt{11}$) (4 $\sqrt{3}$) (5 $\sqrt{2}$) (3 $\sqrt{6}$) (2 $\sqrt{14}$) (2 $\sqrt{15}$) (3 $\sqrt{7}$) (6 $\sqrt{2}$)

26. $\sqrt{(25)(36)}$ 27. $\sqrt{108}$ 28. $\sqrt{3} \cdot \sqrt{7} \cdot \sqrt{3}$ 29. $\sqrt{2}(\sqrt{2} + \sqrt{8})$ 30. $\sqrt{40x^4y^3z^3}$
 $\sqrt{25} \sqrt{36}$ $\sqrt{36} \sqrt{3}$ $\sqrt{9} \sqrt{7}$ $\sqrt{4} + \sqrt{16}$ $\sqrt{4} \sqrt{10} \sqrt{x^2} \sqrt{x^2} \sqrt{y^2} \sqrt{y^2} \sqrt{z^2} \sqrt{z^2}$
 5 · 6 (6 $\sqrt{3}$) (3 $\sqrt{7}$) 2 + 4 = 6 (2x²y³z $\sqrt{10yz}$)
 (30)

31. $\sqrt{60x^5y^6}$ 32. $\frac{4}{\sqrt{6}}$ 33. $\sqrt{\frac{3}{10}}$ 34. $\frac{8}{3-\sqrt{2}} \cdot \frac{3+\sqrt{2}}{3+\sqrt{2}}$ 35. $\frac{2\sqrt{5}}{-4+\sqrt{8}} \cdot \frac{-4-\sqrt{8}}{-4-\sqrt{8}} = \frac{-8\sqrt{5} - 2\sqrt{40}}{16 - \sqrt{64}} = \frac{-8\sqrt{5} - 4\sqrt{10}}{8} = -2\sqrt{5} - \sqrt{10}$
 $\sqrt{4} \sqrt{15} \sqrt{x^2} \sqrt{x^2} \sqrt{x} \sqrt{y^2} \sqrt{y^2} \sqrt{y^2}$ $\frac{4 \cdot \sqrt{6}}{\sqrt{6} \sqrt{6}} = \frac{4\sqrt{6}}{6} = \frac{2\sqrt{6}}{3}$ $\frac{\sqrt{3}}{\sqrt{10}} \cdot \frac{\sqrt{10}}{\sqrt{10}} = \frac{\sqrt{30}}{\sqrt{100}} = \frac{\sqrt{30}}{10}$ $\frac{24+8\sqrt{2}}{9+3\sqrt{2}-3\sqrt{2}-\sqrt{4}} = \frac{24+8\sqrt{2}}{9-2} = \frac{24+8\sqrt{2}}{7}$
 (2x²y³√15x)

36. Estimate the value of the $\sqrt{61}$ 37. $3\sqrt{5b} - 4\sqrt{5b} + 11\sqrt{5b}$ 38. $(3+\sqrt{5})(3-\sqrt{5})$
 (7.7) 10 $\sqrt{5b}$ 9 - 5 = 4
 $\frac{9 - \sqrt{25}}{2} = \frac{9 - 5}{2} = \frac{4}{2} = 2$