

1. $10^{\frac{1}{2}}$ 2. $6^{\frac{5}{2}}$ 3. $5^{\frac{1}{2}}$

4. $7^{\frac{5}{3}}$ 5. $2^{\frac{5}{4}}$ 6. $3^{\frac{2}{5}}$

7. $10^{\frac{3}{2}}$ 8. $4^{\frac{4}{3}}$ 9. $7^{\frac{5}{2}}$

10. $2^{\frac{1}{2}}$

11. $(\sqrt[6]{64})^7$
 2^7
 $= 128$

12. $100^{\frac{1}{2}}$
 $\sqrt{100}$
 $= 10$

13. $9^{\frac{1}{2}}$
 $\sqrt{9}$
 $= 3$

14. 10000
 10000
 10000
 0.75 ← hundredths.
 $\frac{75}{100} = .75$
 $\frac{3}{4}$

15. $125^{\frac{4}{3}}$
 $(\sqrt[3]{125})^4$

$$11. \quad (\sqrt[6]{64})^7$$

$$2^7$$

$$= 128$$

$$12. \quad 100^{\frac{1}{2}}$$

$$\sqrt{100}$$

$$= 10$$

$$13. \quad 9^{\frac{1}{2}}$$

$$\sqrt{9}$$

$$= 3$$

0.75 ← hundredths.

$$14. \quad 10000$$

$$10000 \quad \begin{matrix} 75 \div 25 \\ 100 \div 25 \end{matrix}$$

$$10000 \quad \frac{3}{4}$$

$$(\sqrt[4]{10000})^3$$

$$10^3$$

$$= 1000$$

$$15. \quad 125^{\frac{4}{3}}$$

$$(\sqrt[3]{125})^4$$

$$5^4$$

$$= 625$$

$$16. \quad 64^{\frac{1}{2}}$$

$$\sqrt{64}$$

$$= 8$$

$$17. \quad 216^{\frac{1}{3}}$$

$$\sqrt[3]{216}$$

$$= 6$$

$$\begin{aligned}
 18. \quad & 25^{1.5 \uparrow \text{ tenths}} \\
 & 25^{\frac{15}{10}} \\
 & 25^{\frac{3}{2}} \\
 & (\sqrt{25})^3 \\
 & 5^3 \\
 & = 125
 \end{aligned}$$

$$\begin{aligned}
 19. \quad & 36^{0.5 \uparrow \frac{5}{10} : 5} \\
 & 36^{\frac{1}{2}} \\
 & \sqrt{36} \\
 & = 6
 \end{aligned}$$

$$\begin{aligned}
 20. \quad & 4^{\frac{1}{2}} \\
 & \sqrt{4} \\
 & = 2
 \end{aligned}$$

$$\begin{aligned}
 21. \quad & 4^{\frac{3}{2}} \\
 & (\sqrt{4})^3 \\
 & 2^3 \\
 & = 8
 \end{aligned}$$

$$\begin{aligned}
 22. \quad & 16^{1.25 \uparrow} \\
 & \text{hundreds} \\
 & 16^{\frac{125}{100} = \frac{25}{20}} \\
 & 16^{\frac{5}{4}} \\
 & (4\sqrt{16})^5 \\
 & 2^5 \\
 & = 32
 \end{aligned}$$

$$\begin{aligned}
 23. \quad & 81^{\frac{1}{2}} \\
 & \sqrt{81} \\
 & = 9
 \end{aligned}$$

$$\begin{aligned}
 24. \quad & 25^{\frac{1}{2}} \\
 & \sqrt{25} \\
 & = 5
 \end{aligned}$$

$$= 2$$

$$2^3 \\ = 8$$

$$16 \frac{100}{100} = 25$$

$$16^{5/4}$$

$$(4\sqrt{16})^5$$

$$2^5$$

$$= 32$$

$$23. \quad 81^{1/2}$$

$$\sqrt{81}$$

$$= 9$$

$$24. \quad 25^{1/2}$$

$$\sqrt{25}$$

$$= 5$$

$$25. \quad 64^{5/3}$$

$$(3\sqrt{64})^5$$

$$4^5$$

$$= 1024$$

$$26. \quad 625^{1/4}$$

$$\sqrt[4]{625}$$

$$= 5$$

$$\begin{aligned} 27. \quad & 625^{0.25} \\ & 625^{25/100} \\ & 625^{1/4} \\ & +\sqrt{625} \\ & = 5 \end{aligned}$$

$$\begin{aligned} 28. \quad & 216^{4/3} \\ & (\sqrt[3]{216})^4 \\ & 6^4 \\ & = 1296 \end{aligned}$$

$$\begin{aligned} 29. \quad & 1000^{1/3} \\ & \sqrt[5]{1000} \\ & = 10 \end{aligned}$$

$$\begin{aligned} 30. \quad & 10000^{0.25} \\ & 10000^{25/100} \\ & 10000^{1/4} \\ & +\sqrt{10000} \\ & = 10 \end{aligned}$$

31. $3^{\frac{1}{4}}$
 ${}^4\sqrt{3}$

32. $2^{0.25}$
 $2^{\frac{25}{100}}$
 $2^{\frac{1}{4}}$
 ${}^4\sqrt{2}$

33. $4^{\frac{2}{3}}$
 $({}^3\sqrt{4})^2$

34. $5^{\frac{5}{4}}$
 $({}^4\sqrt{5})^5$

35. $5^{\frac{1}{4}}$
 ${}^4\sqrt{5}$

36. $7^{2.5}$ $\frac{25}{10} \div 5$
 $7^{\frac{5}{2}}$
 $({}^2\sqrt{7})^5$

$\frac{175}{100} \div 25$
 $1.75 \div 25$

35. $5^{\frac{1}{4}}$
 $^4\sqrt{5}$

36. $7^{2.5}$ $\frac{25}{10} \div 5$
 $7^{\frac{5}{2}}$
 $(^2\sqrt{7})^5$

37. $2^{1.75}$ $\frac{175}{100} \div 25$
 $2^{\frac{7}{4}}$
 $(^4\sqrt{2})^7$

38. $2^{\frac{3}{4}}$
 $(^4\sqrt{2})^3$

39. $6^{\frac{4}{3}}$
 $(^3\sqrt{6})^4$

40. $2^{1.5}$ $\frac{15}{10} \div 5$
 $2^{\frac{3}{2}}$
 $(\sqrt{2})^3$