

P. 23 #1-35 odd & #12

$$1. \sqrt[4]{32} \rightarrow \sqrt[4]{16 \cdot 2} \rightarrow 2\sqrt[4]{2}$$

$$3. \sqrt[3]{24} \rightarrow \sqrt[3]{8 \cdot 3} \rightarrow 2\sqrt[3]{2}$$

$$5. \sqrt{16x^4} \rightarrow 4x^2$$

$$7. \sqrt[3]{-8x^4} \rightarrow -2x\sqrt[3]{x}$$

$$9. \sqrt[3]{\frac{x^9}{27}} \rightarrow \frac{\sqrt[3]{x^9}}{\sqrt[3]{27}} \rightarrow \frac{x^3}{3}$$

$$11. \sqrt{\frac{50}{z}} \rightarrow \frac{\sqrt{50}}{\sqrt{z}} \rightarrow \frac{\sqrt{25 \cdot 2}}{\sqrt{z}} \rightarrow \frac{5\sqrt{2}}{\sqrt{z}} \cdot \frac{\sqrt{z}}{\sqrt{z}} \rightarrow \frac{5\sqrt{2z}}{\sqrt{z^2}} = \frac{5\sqrt{2z}}{z}$$

$$12. \sqrt[3]{\frac{x^{15}}{7}} \rightarrow \frac{\sqrt[3]{x^{15}}}{\sqrt[3]{7}} \rightarrow \frac{x^5}{\sqrt[3]{7}} \cdot \frac{\sqrt[3]{49}}{\sqrt[3]{49}} \rightarrow \frac{x^5 \sqrt[3]{49}}{\sqrt[3]{343}} \rightarrow \frac{x^5 \sqrt[3]{49}}{7}$$

$$13. 49^{\frac{1}{2}} \rightarrow (\sqrt{49})^1 = 7$$

$$31. \sqrt{4^3} \rightarrow 4^{\frac{3}{2}}$$

~~OR~~ $\sqrt{64} = 8$

$$15. 16^{\frac{3}{4}} \rightarrow (\sqrt[4]{16})^3 = 8$$

$$33. \sqrt[4]{7^8} = 7^{\frac{8}{4}} = 7^2 = 49$$

$$17. 7^{\frac{1}{3}} \rightarrow (\sqrt[3]{7})^1 = \sqrt[3]{7}$$

$$35. \sqrt[6]{m^4} = m^{\frac{4}{6}} = m^{\frac{2}{3}}$$

$$19. (-27)^{\frac{2}{3}} \rightarrow (\sqrt[3]{-27})^2 = (-3)^2 = 9$$

$$21. (-1000)^{\frac{2}{3}} \rightarrow (\sqrt[3]{-1000})^2 = (-10)^2 = 100$$

$$23. (-1)^{\frac{1}{3}} \rightarrow (\sqrt[3]{-1})^1 = -1$$

$$25. \sqrt[5]{11^2} = 11^{\frac{2}{5}}$$

$$27. \sqrt[8]{y^2} = y^{\frac{2}{8}} = y^{\frac{1}{4}}$$

$$29. \sqrt[3]{9^6} = 9^{\frac{6}{3}} = 9^2 = 81$$