

Simplify

$$\sqrt[2]{X^3} \rightarrow X^{\frac{1}{3}} \cdot X^{\frac{1}{2}} = X^{\frac{1}{6}}$$
$$\sqrt[6]{X^1}$$

Simplify

$$\sqrt[2]{2} \cdot \sqrt[3]{2}$$

$$2^{\frac{1}{2}} \cdot 2^{\frac{1}{3}}$$

$$\frac{3}{3^2} + \frac{1}{3^2}$$

$$2 \rightarrow 2^{\frac{3+1}{6}} \rightarrow 2^{\frac{4}{6}} \rightarrow \sqrt[6]{2^4}$$
$$\sqrt[6]{32}$$