

Roots & Powers

$$\textcircled{1} \quad \sqrt[3]{56} = \sqrt[3]{7 \times 8}$$

$$= 2\sqrt[3]{7}$$

$$56$$

$$7 \times 8$$

$$7 \times 2 \times 4$$

$$7 \times \overset{1}{2} \times \overset{1}{2} \times 2$$

$$2\sqrt[3]{7}$$

$$\textcircled{3} \quad \sqrt[3]{432} = \sqrt[3]{16 \times 27}$$

$$= \sqrt[3]{\overset{1}{4} \times \overset{1}{4} \times 3 \times 9}$$

$$\quad \quad \quad \underbrace{2 \times 2 \times 2} \times \underbrace{3 \times 3 \times 3}$$

$$6\sqrt[3]{2}$$

$$\sqrt[3]{16 \times 27}$$

$$3\sqrt[3]{16}$$

$$3\sqrt[3]{8 \times 2}$$

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

$$6\sqrt[3]{2}$$

$$\text{II} \quad 3\sqrt[3]{5} = \sqrt[3]{3 \times 3 \times 3 \times 5}$$

$$= \sqrt[3]{135}$$

$$\text{IV} \quad 8^{\frac{5}{2}} = 181.0\dots$$

$$\left(\sqrt[2]{8}\right)^5$$

$$8^{\wedge} \left(\frac{5}{2}\right)$$

$$y^x$$