



QT Negative Fractional Indices

1. Find the value of $64^{-\frac{2}{3}}$

$$\left[\left(\frac{1}{64} \right)^{\frac{1}{3}} \right]^2 = \left(\frac{1}{4} \right)^2 = \frac{1}{16}$$

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

2. Find the value of $16^{-\frac{3}{4}}$

$$\left[\left(\frac{1}{16} \right)^{\frac{1}{4}} \right]^3 = \left(\frac{1}{2} \right)^3 = \frac{1}{8}$$

$$\frac{3}{4} = \frac{1}{4} + 3$$

3. Find the value of $\left(\frac{16}{25} \right)^{-\frac{3}{2}}$

$$\left[\left(\frac{25}{16} \right)^{\frac{1}{2}} \right]^3 = \left(\frac{5}{4} \right)^3 = \frac{125}{64}$$

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

4. Find the value of $\left(\frac{4}{9} \right)^{-\frac{3}{2}}$

$$\left[\left(\frac{9}{4} \right)^{\frac{1}{2}} \right]^3 = \left(\frac{3}{2} \right)^3 = \frac{27}{8}$$