

$$\textcircled{2} \frac{1^{1/2}}{2} \times \frac{1^{2/3}}{2} = \frac{1}{2} + \frac{2}{3} = \frac{3+4}{6}$$

$$= \frac{7}{6} = \left(\frac{1}{2}\right)^{7/6}$$

$$\textcircled{3} \frac{3^2 + \sqrt{3}}{3^5} = \frac{3^{2-1/2}}{3^{5+5/2}} = \frac{2+1/2}{4+5/2}$$

$$\frac{4+1}{2} = 3^{5/2}$$

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$$\frac{\frac{2}{5}}{2^{3/4}} = \frac{2^{1-3/4}}{5^{3/4}} = \frac{1-3}{1-4} = \frac{4-3}{4}$$

$$\frac{2^{1-3/4}}{5} = 1 - \frac{3}{4} = \frac{4-3}{4} = \frac{2^{1/4}}{5}$$