

$$2. \quad 8^{2/3} = (\sqrt[3]{8})^2 = 2^2 = 4$$

$$8. \quad \left(\frac{4}{81}\right)^{3/2} = \left(\sqrt{\frac{4}{81}}\right)^3 = \left(\frac{2}{9}\right)^3$$

$\frac{8}{729}$