

Correct. $\frac{\sqrt[3]{162x^4y^6}}{\sqrt[3]{6xy^3}} = \sqrt[3]{\frac{162x^4y^6}{6xy^3}} = \sqrt[3]{\frac{27x^3y^3}{1} \cdot \frac{6xy^3}{6xy^3}}$

$$= \sqrt[3]{27x^3y^3} = \sqrt[3]{27} \cdot \sqrt[3]{x^3} \cdot \sqrt[3]{y^3} = 3xy$$