

6013(a)

$$\left(\frac{a^2}{27}\right)^{\frac{1}{3}} \cdot \left(\frac{64}{a}\right)^{\frac{2}{3}} = \frac{\cancel{a^{\frac{2}{3}}}}{27^{\frac{1}{3}}} \cdot \frac{64^{\frac{2}{3}}}{\cancel{a^{\frac{2}{3}}}} = \frac{(\sqrt[3]{64})^2}{\sqrt[3]{27}} = \frac{4^2}{3} = \frac{16}{3}$$

6013(p)

$$\left(\frac{81}{4}\right)^{\frac{1}{4}} \cdot \left(\frac{1}{4}\right)^{-\frac{3}{4}} = \sqrt[4]{81} \cdot \left(\frac{1}{4}\right)^{\frac{1}{4}} \cdot \left(\frac{1}{4}\right)^{-\frac{3}{4}} = 3 \cdot \left(\frac{1}{4}\right)^{-\frac{1}{2}} = 3 \cdot 4^{\frac{1}{2}} = 3\sqrt{4} = 3 \cdot 2 = \underline{\underline{6}}$$

6013g

$$6^{\frac{5}{2}} \cdot \left(\frac{3}{2}\right)^{-\frac{3}{2}} = 2^{\frac{5}{2}} \cdot 3^{\frac{5}{2}} \cdot 3^{-\frac{3}{2}} \cdot 2^{\frac{3}{2}} = 2^{\frac{5}{2} + \frac{3}{2}} \cdot 3^{\frac{5}{2} - \frac{3}{2}} = 2^4 \cdot 3 = 16 \cdot 3 = \underline{\underline{48}}$$