

8-23-19 3rd Try

$$mg \cdot \text{cm}^{-2} = \frac{mg}{\text{cm}^2}$$



$$\textcircled{1} \left(\frac{2m}{5y} \right)^{-2}$$

$$\boxed{\left(\frac{2m}{5y} \right)^{-1} \cdot 2}$$

$$\left(\frac{5y}{2m} \right)^2 = \frac{5y}{2m} \cdot \frac{5y}{2m} = \frac{25y^2}{4m^2}$$

$$\textcircled{2} \frac{2a^{-2}b^2}{3^{-1}ab}$$

$$\frac{3 \cdot 2 b^2}{a^2 a b} = \frac{3 \cdot 2 \cdot b \cdot b}{a a a b}$$

$$\frac{6b}{a^3}$$

$$\textcircled{3} \left(\frac{a^{-2}b^2}{a b^{-1}} \right)^{-2}$$

$$\frac{b^2 b}{a^2 a}$$

$$\boxed{\left(\frac{b^3}{a^3} \right)^{-1} \cdot 2}$$

$$\left(\frac{a^3}{b^3} \right)^2$$

$$\frac{a^3}{b^3} \cdot \frac{a^3}{b^3} = \frac{a a a}{b b b} \cdot \frac{a a a}{b b b} = \frac{a^6}{b^6}$$

$$\textcircled{4} (2a^{-2}n^{-1}y^2)^{-2}$$

$$\left(\frac{2y^2}{a^2n}\right)^{-1 \cdot 2}$$

$$\left(\frac{a^2n}{2y^2}\right)^2$$

$$\frac{a^2n}{2y^2} \cdot \frac{a^2n}{2y^2} = \frac{a^4n^2}{4y^4}$$

$$\textcircled{5} \left(\frac{2}{5}\right)^{-2}$$

$$\left(\frac{2}{5}\right)^{-1 \cdot 2}$$

$$\left(\frac{5}{2}\right)^2 = \frac{5}{2} \cdot \frac{5}{2} = \frac{25}{4}$$

$$\textcircled{6} \left(\frac{2a^{-2}b^3}{a^{-3}b^4}\right)^{-2}$$

$$\left(\frac{2a^3b^3}{a^2b^4}\right)^{-2}$$

$$\left(\frac{\cancel{2} \cancel{a} \cancel{a} \cancel{a} \cancel{b} \cancel{b} \cancel{b}}{\cancel{a} \cancel{a} \cancel{b} \cancel{b} \cancel{b} \cancel{b}}\right)^{-2}$$

$$\left(\frac{2a}{b}\right)^{-1 \cdot 2}$$

$$\left(\frac{b}{2a}\right)^2 = \frac{b}{2a} \cdot \frac{b}{2a} = \frac{b^2}{4a^2}$$

$$\textcircled{7} \left(\frac{a^{-3}}{b^{-2}} \right)^{-3}$$

$$\left(\frac{b^2}{a^3} \right)^{-1 \cdot 3}$$

$$\left(\frac{a^3}{b^2} \right)^3 = \frac{a^3}{b^2} \cdot \frac{a^3}{b^2} \cdot \frac{a^3}{b^2} = \frac{a^9}{b^6}$$

8-23-19 4th Tr: y

$$mg \cdot cm^{-3} \quad \frac{mg}{cm^3} \quad \text{[cube icon]}$$

$$\textcircled{1} \quad \frac{a^{-3} b}{a b^{-2}}$$

$$\frac{b^2 b}{a a^3} = \frac{bbb}{aaaa} = \frac{b^3}{a^4}$$

$$\textcircled{2} \quad \frac{2^{-1} a^2 b^{-3}}{5 a^{-1} b}$$

$$\frac{a^2 a}{2 \cdot b^3 \cdot 5 b} = \frac{aaa}{2 \cdot bbb \cdot 5b}$$
$$= \frac{a^3}{10b^4}$$

$$\textcircled{3} \quad \left(\frac{2a^{-2}}{5b} \right)^{-2}$$

$$\left(\frac{2}{5ba^2} \right)^{-1} \cdot 2$$

$$\left(\frac{5ba^2}{2} \right)^2$$

$$\frac{5ba^2}{2} \cdot \frac{5ba^2}{2} = \frac{25b^2a^4}{4}$$

$$\textcircled{4} (2a^{-3}b^{-2}y)^{-2}$$

$$\left(\frac{2y}{a^3b^2}\right)^{-1 \cdot 2}$$

$$\left(\frac{a^3b^2}{2y}\right)^2$$

$$\frac{a^3b^2}{2y} \cdot \frac{a^3b^2}{2y} = \frac{a^3a^3b^2b^2}{2y \cdot 2y} = \frac{a^6b^4}{4y^2}$$

$$\frac{a^6b^4}{4y^2}$$

$$\textcircled{5} \left(\frac{a^{-3}b^{-2}}{y}\right)^{-2}$$

$$\left(\frac{1}{a^3b^2y}\right)^{-1 \cdot 2}$$

$$(a^3b^2y)^2$$

$$\begin{array}{c} a^3b^2y \cdot a^3b^2y \\ a^3a^3b^2b^2y \cdot y \\ a^6b^4y^2 \end{array}$$

$$\textcircled{6} \left(\frac{2}{3}\right)^{-3}$$

$$\left(\frac{2}{3}\right)^{-1 \cdot 3}$$

$$\left(\frac{3}{2}\right)^3 = \frac{3}{2} \cdot \frac{3}{2} \cdot \frac{3}{2} = \frac{27}{8}$$

$$\textcircled{7} \left(\frac{-2a^{-3}b}{y^2a^{-2}} \right)^{-2}$$

$$\left(\frac{-2ba^{\cancel{3}}}{y^2a^{\cancel{2}}} \right)^{-2}$$

$$\boxed{\left(\frac{-2b}{y^2a} \right)^{-2}}$$

$$\left(\frac{y^2a}{-2b} \right)^2 = \frac{y^2a}{-2b} \cdot \frac{y^2a}{-2b} = \frac{y^4a^2}{4b^2}$$