



Simplifying Fraction Exponent Expressions (Division)

Name: _____

Date: _____ Score: _____

$$\frac{\left(\frac{4}{9}\right)^{-9} \cdot \left(\frac{4}{9}\right)^3 \cdot \left(\frac{4}{9}\right)^{-6} \cdot \left(\frac{4}{9}\right)^{-2}}{\left(\frac{4}{9}\right)^3 \cdot \left(\frac{4}{9}\right)^{11}}$$

$$\frac{\left(\frac{2}{7}\right)^5 \cdot \left(\frac{2}{7}\right)^{-3} \cdot \left(\frac{2}{7}\right)}{\left(\frac{2}{7}\right)^{11}}$$

$$\left(\frac{3}{7}\right)^3 \cdot \left(\frac{3}{7}\right)^6 \cdot \left(\frac{3}{7}\right)^{-7}$$

$$\frac{\left(\frac{1}{2}\right)^{-1} \cdot \left(\frac{1}{2}\right)^{11} \cdot \left(\frac{1}{2}\right)^6 \cdot \left(\frac{1}{2}\right)^{-2}}{\left(\frac{1}{2}\right)^{-4} \cdot \left(\frac{1}{2}\right)^9}$$

$$\frac{\left(\frac{1}{4}\right)^{-3} \cdot \left(\frac{1}{4}\right)^{10} \cdot \left(\frac{1}{4}\right)^8}{\left(\frac{1}{4}\right)^{-6}}$$

$$\frac{\left(\frac{1}{3}\right)^{-5} \cdot \left(\frac{1}{3}\right)^{-6} \cdot \left(\frac{1}{3}\right)^8}{\left(\frac{1}{3}\right)^9}$$

$$\frac{\left(\frac{1}{6}\right)^9 \cdot \left(\frac{1}{6}\right)^{-2} \cdot \left(\frac{1}{6}\right)^6 \cdot \left(\frac{1}{6}\right)^6}{\left(\frac{1}{6}\right)^{-10} \cdot \left(\frac{1}{6}\right)^{-2}}$$

$$\left(\frac{2}{7}\right)^8 \cdot \left(\frac{2}{7}\right)^{-8} \cdot \left(\frac{2}{7}\right)^{-1}$$

$$\frac{\left(\frac{2}{9}\right)^5 \cdot \left(\frac{2}{9}\right) \cdot \left(\frac{2}{9}\right)^{-9} \cdot \left(\frac{2}{9}\right)^9}{\left(\frac{2}{9}\right)^{-1} \cdot \left(\frac{2}{9}\right)^8}$$

$$\frac{\left(\frac{4}{5}\right)^{-7} \cdot \left(\frac{4}{5}\right)^{11} \cdot \left(\frac{4}{5}\right)^{-4} \cdot \left(\frac{4}{5}\right)^{-5}}{\left(\frac{4}{5}\right)^{-5} \cdot \left(\frac{4}{5}\right)^{-3}}$$

$$\frac{\left(\frac{1}{7}\right)^{-1} \cdot \left(\frac{1}{7}\right)^{-10} \cdot \left(\frac{1}{7}\right)^2}{\left(\frac{1}{7}\right)^{-5}}$$

$$\frac{\left(\frac{2}{9}\right)^{-1} \cdot \left(\frac{2}{9}\right)^7 \cdot \left(\frac{2}{9}\right)}{\left(\frac{2}{9}\right)^8}$$

$$\frac{\left(\frac{2}{3}\right)^{-2} \cdot \left(\frac{2}{3}\right)^8 \cdot \left(\frac{2}{3}\right)^{-3} \cdot \left(\frac{2}{3}\right)^{-10}}{\left(\frac{2}{3}\right)^{-2} \cdot \left(\frac{2}{3}\right)^{-2}}$$

$$\left(\frac{3}{7}\right)^5 \cdot \left(\frac{3}{7}\right)^{-10} \cdot \left(\frac{3}{7}\right)^{11}$$

$$\left(\frac{1}{3}\right)^{10} \cdot \left(\frac{1}{3}\right)^{-7} \cdot \left(\frac{1}{3}\right)^{-4}$$



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$$\frac{\left(\frac{4}{9}\right)^{-9} \cdot \left(\frac{4}{9}\right)^3 \cdot \left(\frac{4}{9}\right)^{-6} \cdot \left(\frac{4}{9}\right)^{-2}}{\left(\frac{4}{9}\right)^3 \cdot \left(\frac{4}{9}\right)^{11}}$$

$\left(\frac{4}{9}\right)^{-28}$

$$\frac{\left(\frac{2}{7}\right)^5 \cdot \left(\frac{2}{7}\right)^{-3} \cdot \left(\frac{2}{7}\right)}{\left(\frac{2}{7}\right)^{11}}$$

$\left(\frac{2}{7}\right)^{-8}$

$$\left(\frac{3}{7}\right)^3 \cdot \left(\frac{3}{7}\right)^6 \cdot \left(\frac{3}{7}\right)^{-7}$$

$\left(\frac{3}{7}\right)^2$

$$\frac{\left(\frac{1}{2}\right)^{-1} \cdot \left(\frac{1}{2}\right)^{11} \cdot \left(\frac{1}{2}\right)^6 \cdot \left(\frac{1}{2}\right)^{-2}}{\left(\frac{1}{2}\right)^{-4} \cdot \left(\frac{1}{2}\right)^9}$$

$\left(\frac{1}{2}\right)^9$

$$\frac{\left(\frac{1}{4}\right)^{-3} \cdot \left(\frac{1}{4}\right)^{10} \cdot \left(\frac{1}{4}\right)^8}{\left(\frac{1}{4}\right)^{-6}}$$

$\left(\frac{1}{4}\right)^{21}$

$$\frac{\left(\frac{1}{3}\right)^{-5} \cdot \left(\frac{1}{3}\right)^{-6} \cdot \left(\frac{1}{3}\right)^8}{\left(\frac{1}{3}\right)^9}$$

$\left(\frac{1}{3}\right)^{-12}$

$$\frac{\left(\frac{1}{6}\right)^9 \cdot \left(\frac{1}{6}\right)^{-2} \cdot \left(\frac{1}{6}\right)^6 \cdot \left(\frac{1}{6}\right)^6}{\left(\frac{1}{6}\right)^{-10} \cdot \left(\frac{1}{6}\right)^{-2}}$$

$\left(\frac{1}{6}\right)^{31}$

$$\left(\frac{2}{7}\right)^8 \cdot \left(\frac{2}{7}\right)^{-8} \cdot \left(\frac{2}{7}\right)^{-1}$$

$\left(\frac{2}{7}\right)^{-1}$

$$\frac{\left(\frac{2}{9}\right)^5 \cdot \left(\frac{2}{9}\right) \cdot \left(\frac{2}{9}\right)^{-9} \cdot \left(\frac{2}{9}\right)^9}{\left(\frac{2}{9}\right)^{-1} \cdot \left(\frac{2}{9}\right)^8}$$

$\left(\frac{2}{9}\right)^{-1}$

$$\frac{\left(\frac{4}{5}\right)^{-7} \cdot \left(\frac{4}{5}\right)^{11} \cdot \left(\frac{4}{5}\right)^{-4} \cdot \left(\frac{4}{5}\right)^{-5}}{\left(\frac{4}{5}\right)^{-5} \cdot \left(\frac{4}{5}\right)^{-3}}$$

$\left(\frac{4}{5}\right)^3$

$$\frac{\left(\frac{1}{7}\right)^{-1} \cdot \left(\frac{1}{7}\right)^{-10} \cdot \left(\frac{1}{7}\right)^2}{\left(\frac{1}{7}\right)^{-5}}$$

$\left(\frac{1}{7}\right)^{-4}$

$$\frac{\left(\frac{2}{9}\right)^{-1} \cdot \left(\frac{2}{9}\right)^7 \cdot \left(\frac{2}{9}\right)}{\left(\frac{2}{9}\right)^8}$$

$\left(\frac{2}{9}\right)^{-1}$

$$\frac{\left(\frac{2}{3}\right)^{-2} \cdot \left(\frac{2}{3}\right)^8 \cdot \left(\frac{2}{3}\right)^{-3} \cdot \left(\frac{2}{3}\right)^{-10}}{\left(\frac{2}{3}\right)^{-2} \cdot \left(\frac{2}{3}\right)^{-2}}$$

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

$$\left(\frac{3}{7}\right)^5 \cdot \left(\frac{3}{7}\right)^{-10} \cdot \left(\frac{3}{7}\right)^{11}$$

$\left(\frac{3}{7}\right)^6$

$$\left(\frac{1}{3}\right)^{10} \cdot \left(\frac{1}{3}\right)^{-7} \cdot \left(\frac{1}{3}\right)^{-4}$$

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