



Simplifying Fraction Exponent Expressions  
(Division)

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Score: \_\_\_\_\_

$$\left(\frac{1}{3}\right)^3 \cdot \left(\frac{1}{3}\right)^8 \cdot \left(\frac{1}{3}\right)^{11}$$

$$\frac{\left(\frac{1}{4}\right)^{-8} \cdot \left(\frac{1}{4}\right)^9 \cdot \left(\frac{1}{4}\right)^{-2}}{\left(\frac{1}{4}\right)^{10}}$$

$$\left(\frac{1}{2}\right)^{-2} \cdot \left(\frac{1}{2}\right)^{11} \cdot \left(\frac{1}{2}\right)^5$$

$$\frac{\left(\frac{2}{3}\right)^{-10} \cdot \left(\frac{2}{3}\right)^3 \cdot \left(\frac{2}{3}\right)^{-4} \cdot \left(\frac{2}{3}\right)^{-10}}{\left(\frac{2}{3}\right)^{-7} \cdot \left(\frac{2}{3}\right)^{-1}}$$

$$\frac{\left(\frac{2}{3}\right)^{-10} \cdot \left(\frac{2}{3}\right)^{-5} \cdot \left(\frac{2}{3}\right)^7}{\left(\frac{2}{3}\right)^{-5}}$$

$$\left(\frac{4}{5}\right)^9 \cdot \left(\frac{4}{5}\right)^3 \cdot \left(\frac{4}{5}\right)^5$$

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

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

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

$$\left(\frac{2}{5}\right)^{10} \cdot \left(\frac{2}{5}\right)^7 \cdot \left(\frac{2}{5}\right)^{-8}$$

$$\frac{\left(\frac{2}{7}\right)^{-2} \cdot \left(\frac{2}{7}\right)^4 \cdot \left(\frac{2}{7}\right)^{-9} \cdot \left(\frac{2}{7}\right)^7}{\left(\frac{2}{7}\right)^7 \cdot \left(\frac{2}{7}\right)^{-5}}$$

$$\left(\frac{3}{7}\right)^7 \cdot \left(\frac{3}{7}\right)^2 \cdot \left(\frac{3}{7}\right)^4$$

$$\frac{\left(\frac{1}{4}\right)^8 \cdot \left(\frac{1}{4}\right)^{-6} \cdot \left(\frac{1}{4}\right)^8 \cdot \left(\frac{1}{4}\right)^{-8}}{\left(\frac{1}{4}\right)^{-7} \cdot \left(\frac{1}{4}\right)^3}$$

$$\left(\frac{2}{3}\right)^3 \cdot \left(\frac{2}{3}\right)^4 \cdot \left(\frac{2}{3}\right)^3$$

$$\frac{\left(\frac{1}{8}\right)^8 \cdot \left(\frac{1}{8}\right)^5 \cdot \left(\frac{1}{8}\right)^{-9} \cdot \left(\frac{1}{8}\right)^3}{\left(\frac{1}{8}\right)^{11} \cdot \left(\frac{1}{8}\right)^2}$$



## Simplifying Fraction Exponent Expressions (Division)

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$$\frac{\left(\frac{1}{3}\right)^3 \cdot \left(\frac{1}{3}\right)^8 \cdot \left(\frac{1}{3}\right)^{11}}{\left(\frac{1}{3}\right)^{22}}$$

$$\frac{\left(\frac{1}{4}\right)^{-8} \cdot \left(\frac{1}{4}\right)^9 \cdot \left(\frac{1}{4}\right)^{-2}}{\left(\frac{1}{4}\right)^{10}} = \left(\frac{1}{4}\right)^{-11}$$

$$\frac{\left(\frac{1}{2}\right)^{-2} \cdot \left(\frac{1}{2}\right)^{11} \cdot \left(\frac{1}{2}\right)^5}{\left(\frac{1}{2}\right)^{14}}$$

$$\frac{\left(\frac{2}{3}\right)^{-10} \cdot \left(\frac{2}{3}\right)^3 \cdot \left(\frac{2}{3}\right)^{-4} \cdot \left(\frac{2}{3}\right)^{-10}}{\left(\frac{2}{3}\right)^{-7} \cdot \left(\frac{2}{3}\right)^{-1}} = \left(\frac{2}{3}\right)^{-13}$$

$$\frac{\left(\frac{2}{3}\right)^{-10} \cdot \left(\frac{2}{3}\right)^{-5} \cdot \left(\frac{2}{3}\right)^7}{\left(\frac{2}{3}\right)^{-5}} = \left(\frac{2}{3}\right)^{-3}$$

$$\frac{\left(\frac{4}{5}\right)^9 \cdot \left(\frac{4}{5}\right)^3 \cdot \left(\frac{4}{5}\right)^5}{\left(\frac{4}{5}\right)^{17}}$$

$$\frac{\left(\frac{1}{4}\right) \cdot \left(\frac{1}{4}\right)^{-10} \cdot \left(\frac{1}{4}\right)^{-6}}{\left(\frac{1}{4}\right)^{-15}}$$

$$\frac{\left(\frac{1}{3}\right)^8 \cdot \left(\frac{1}{3}\right)^8 \cdot \left(\frac{1}{3}\right)^{-9}}{\left(\frac{1}{3}\right)^{-5}} = \left(\frac{1}{3}\right)^{12}$$

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

$$\frac{\left(\frac{2}{5}\right)^{10} \cdot \left(\frac{2}{5}\right)^7 \cdot \left(\frac{2}{5}\right)^{-8}}{\left(\frac{2}{5}\right)^9}$$

$$\frac{\left(\frac{2}{7}\right)^{-2} \cdot \left(\frac{2}{7}\right)^4 \cdot \left(\frac{2}{7}\right)^{-9} \cdot \left(\frac{2}{7}\right)^7}{\left(\frac{2}{7}\right)^7 \cdot \left(\frac{2}{7}\right)^{-5}} = \left(\frac{2}{7}\right)^{-2}$$

$$\frac{\left(\frac{3}{7}\right)^7 \cdot \left(\frac{3}{7}\right)^2 \cdot \left(\frac{3}{7}\right)^4}{\left(\frac{3}{7}\right)^{13}}$$

$$\frac{\left(\frac{1}{4}\right)^8 \cdot \left(\frac{1}{4}\right)^{-6} \cdot \left(\frac{1}{4}\right)^8 \cdot \left(\frac{1}{4}\right)^{-8}}{\left(\frac{1}{4}\right)^{-7} \cdot \left(\frac{1}{4}\right)^3} = \left(\frac{1}{4}\right)^6$$

$$\frac{\left(\frac{2}{3}\right)^3 \cdot \left(\frac{2}{3}\right)^4 \cdot \left(\frac{2}{3}\right)^3}{\left(\frac{2}{3}\right)^{10}}$$

$$\frac{\left(\frac{1}{8}\right)^8 \cdot \left(\frac{1}{8}\right)^5 \cdot \left(\frac{1}{8}\right)^{-9} \cdot \left(\frac{1}{8}\right)^3}{\left(\frac{1}{8}\right)^{11} \cdot \left(\frac{1}{8}\right)^2} = \left(\frac{1}{8}\right)^{-6}$$