



# Simplifying Fraction Exponent Expressions (Division)

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

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

$$\frac{\left(\frac{4}{9}\right)^5 \cdot \left(\frac{4}{9}\right)^{-4} \cdot \left(\frac{4}{9}\right)^{11} \cdot \left(\frac{4}{9}\right)^{-3}}{\left(\frac{4}{9}\right)^7 \cdot \left(\frac{4}{9}\right)^{-5}}$$

$$\frac{\left(\frac{1}{7}\right)^8 \cdot \left(\frac{1}{7}\right)^{-10} \cdot \left(\frac{1}{7}\right)^5}{\left(\frac{1}{7}\right)^{10}}$$

$$\frac{\left(\frac{1}{5}\right)^{-3} \cdot \left(\frac{1}{5}\right)^{-8} \cdot \left(\frac{1}{5}\right)^{-6} \cdot \left(\frac{1}{5}\right)^{-4}}{\left(\frac{1}{5}\right) \cdot \left(\frac{1}{5}\right)^{-5}}$$

$$\frac{\left(\frac{3}{5}\right)^{10} \cdot \left(\frac{3}{5}\right)^{-2} \cdot \left(\frac{3}{5}\right)^8 \cdot \left(\frac{3}{5}\right)^{10}}{\left(\frac{3}{5}\right)^8 \cdot \left(\frac{3}{5}\right)^2}$$

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

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

$$\frac{\left(\frac{4}{5}\right)^4 \cdot \left(\frac{4}{5}\right)^{11} \cdot \left(\frac{4}{5}\right)^{-5} \cdot \left(\frac{4}{5}\right)^{-2}}{\left(\frac{4}{5}\right)^{11} \cdot \left(\frac{4}{5}\right)^8}$$

$$\frac{\left(\frac{1}{6}\right)^{-6} \cdot \left(\frac{1}{6}\right)^{-9} \cdot \left(\frac{1}{6}\right)^{-2} \cdot \left(\frac{1}{6}\right)^4}{\left(\frac{1}{6}\right)^5 \cdot \left(\frac{1}{6}\right)}$$

$$\frac{\left(\frac{1}{9}\right)^6 \cdot \left(\frac{1}{9}\right)^{-5} \cdot \left(\frac{1}{9}\right)^3 \cdot \left(\frac{1}{9}\right)^{-3}}{\left(\frac{1}{9}\right)^4 \cdot \left(\frac{1}{9}\right)^{-7}}$$

$$\frac{\left(\frac{4}{7}\right)^9 \cdot \left(\frac{4}{7}\right)^9 \cdot \left(\frac{4}{7}\right)^9 \cdot \left(\frac{4}{7}\right)^{-2}}{\left(\frac{4}{7}\right)^9 \cdot \left(\frac{4}{7}\right)^{-8}}$$

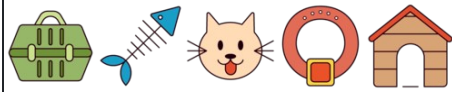
$$\frac{\left(\frac{1}{7}\right)^{-1} \cdot \left(\frac{1}{7}\right)^7 \cdot \left(\frac{1}{7}\right)^{-10} \cdot \left(\frac{1}{7}\right)^2}{\left(\frac{1}{7}\right) \cdot \left(\frac{1}{7}\right)^{-1}}$$

$$\left(\frac{1}{6}\right)^{-1} \cdot \left(\frac{1}{6}\right)^{-2} \cdot \left(\frac{1}{6}\right)^{-7}$$

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

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

$$\frac{\left(\frac{1}{2}\right)^7 \cdot \left(\frac{1}{2}\right)^3 \cdot \left(\frac{1}{2}\right)^{-10} \cdot \left(\frac{1}{2}\right)^{-8}}{\left(\frac{1}{2}\right)^2 \cdot \left(\frac{1}{2}\right)^{-2}}$$



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$$\frac{\left(\frac{4}{9}\right)^5 \cdot \left(\frac{4}{9}\right)^{-4} \cdot \left(\frac{4}{9}\right)^{11} \cdot \left(\frac{4}{9}\right)^{-3}}{\left(\frac{4}{9}\right)^7 \cdot \left(\frac{4}{9}\right)^{-5}}$$

$\left(\frac{4}{9}\right)^7$

$$\frac{\left(\frac{1}{7}\right)^8 \cdot \left(\frac{1}{7}\right)^{-10} \cdot \left(\frac{1}{7}\right)^5}{\left(\frac{1}{7}\right)^{10}}$$

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

$$\frac{\left(\frac{1}{5}\right)^{-3} \cdot \left(\frac{1}{5}\right)^{-8} \cdot \left(\frac{1}{5}\right)^{-6} \cdot \left(\frac{1}{5}\right)^{-4}}{\left(\frac{1}{5}\right) \cdot \left(\frac{1}{5}\right)^{-5}}$$

$\left(\frac{1}{5}\right)^{-17}$

$$\frac{\left(\frac{3}{5}\right)^{10} \cdot \left(\frac{3}{5}\right)^{-2} \cdot \left(\frac{3}{5}\right)^8 \cdot \left(\frac{3}{5}\right)^{10}}{\left(\frac{3}{5}\right)^8 \cdot \left(\frac{3}{5}\right)^2}$$

$\left(\frac{3}{5}\right)^{16}$

$$\frac{\left(\frac{1}{7}\right)^4 \cdot \left(\frac{1}{7}\right)^8 \cdot \left(\frac{1}{7}\right)^6}{\left(\frac{1}{7}\right)^{18}}$$

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

$$\frac{\left(\frac{4}{5}\right)^4 \cdot \left(\frac{4}{5}\right)^{11} \cdot \left(\frac{4}{5}\right)^{-5} \cdot \left(\frac{4}{5}\right)^{-2}}{\left(\frac{4}{5}\right)^{11} \cdot \left(\frac{4}{5}\right)^8}$$

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

$$\frac{\left(\frac{1}{6}\right)^{-6} \cdot \left(\frac{1}{6}\right)^{-9} \cdot \left(\frac{1}{6}\right)^{-2} \cdot \left(\frac{1}{6}\right)^4}{\left(\frac{1}{6}\right)^5 \cdot \left(\frac{1}{6}\right)}$$

$\left(\frac{1}{6}\right)^{-19}$

$$\frac{\left(\frac{1}{9}\right)^6 \cdot \left(\frac{1}{9}\right)^{-5} \cdot \left(\frac{1}{9}\right)^3 \cdot \left(\frac{1}{9}\right)^{-3}}{\left(\frac{1}{9}\right)^4 \cdot \left(\frac{1}{9}\right)^{-7}}$$

$\left(\frac{1}{9}\right)^4$

$$\frac{\left(\frac{4}{7}\right)^9 \cdot \left(\frac{4}{7}\right)^9 \cdot \left(\frac{4}{7}\right)^9 \cdot \left(\frac{4}{7}\right)^{-2}}{\left(\frac{4}{7}\right)^9 \cdot \left(\frac{4}{7}\right)^{-8}}$$

$\left(\frac{4}{7}\right)^{24}$

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

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

$$\frac{\left(\frac{1}{6}\right)^{-1} \cdot \left(\frac{1}{6}\right)^{-2} \cdot \left(\frac{1}{6}\right)^{-7}}{\left(\frac{1}{6}\right)^{-10}}$$

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

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

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

$\left(\frac{4}{5}\right)^{26}$

$$\frac{\left(\frac{1}{2}\right)^7 \cdot \left(\frac{1}{2}\right)^3 \cdot \left(\frac{1}{2}\right)^{-10} \cdot \left(\frac{1}{2}\right)^{-8}}{\left(\frac{1}{2}\right)^2 \cdot \left(\frac{1}{2}\right)^{-2}}$$

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