



## Simplificando os expoentes de fração (divisão)

Nome: \_\_\_\_\_

Encontro: Data: \_\_\_\_\_ Pontuação: \_\_\_\_\_

$$\frac{\left(\frac{1}{2}\right)^{-7} \cdot \left(\frac{1}{2}\right)^{-5} \cdot \left(\frac{1}{2}\right)^3}{\left(\frac{1}{2}\right)^{-4}}$$

$$\frac{\left(\frac{1}{3}\right)^{-9} \cdot \left(\frac{1}{3}\right)^{-10} \cdot \left(\frac{1}{3}\right)^{11} \cdot \left(\frac{1}{3}\right)^9}{\left(\frac{1}{3}\right)^{11} \cdot \left(\frac{1}{3}\right)^{-2}}$$

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

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

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

$$\left(\frac{2}{9}\right)^3 \cdot \left(\frac{2}{9}\right)^5 \cdot \left(\frac{2}{9}\right)^3$$

$$\frac{\left(\frac{1}{3}\right)^{-7} \cdot \left(\frac{1}{3}\right)^{-7} \cdot \left(\frac{1}{3}\right)^{-4} \cdot \left(\frac{1}{3}\right)^{-6}}{\left(\frac{1}{3}\right)^4 \cdot \left(\frac{1}{3}\right)^{-2}}$$

$$\frac{\left(\frac{4}{9}\right)^8 \cdot \left(\frac{4}{9}\right) \cdot \left(\frac{4}{9}\right)^{-4} \cdot \left(\frac{4}{9}\right)^{-3}}{\left(\frac{4}{9}\right) \cdot \left(\frac{4}{9}\right)^{-3}}$$

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

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

$$\frac{\left(\frac{2}{5}\right)^{-1} \cdot \left(\frac{2}{5}\right)^2 \cdot \left(\frac{2}{5}\right)^{-5} \cdot \left(\frac{2}{5}\right)^9}{\left(\frac{2}{5}\right)^{-6} \cdot \left(\frac{2}{5}\right)^7}$$

$$\frac{\left(\frac{1}{6}\right)^{-6} \cdot \left(\frac{1}{6}\right)^{-7} \cdot \left(\frac{1}{6}\right)^{-10} \cdot \left(\frac{1}{6}\right)}{\left(\frac{1}{6}\right)^{-3} \cdot \left(\frac{1}{6}\right)^{-4}}$$

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

$$\frac{\left(\frac{4}{9}\right)^{-5} \cdot \left(\frac{4}{9}\right)^{-10} \cdot \left(\frac{4}{9}\right)^4}{\left(\frac{4}{9}\right)^5}$$

$$\frac{\left(\frac{3}{7}\right)^8 \cdot \left(\frac{3}{7}\right)^{11} \cdot \left(\frac{3}{7}\right)^6}{\left(\frac{3}{7}\right)^{-1}}$$



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$$\frac{\left(\frac{1}{2}\right)^{-7} \cdot \left(\frac{1}{2}\right)^{-5} \cdot \left(\frac{1}{2}\right)^3}{\left(\frac{1}{2}\right)^{-4}}$$
$$\left(\frac{1}{2}\right)^{-5}$$

$$\frac{\left(\frac{1}{3}\right)^{-9} \cdot \left(\frac{1}{3}\right)^{-10} \cdot \left(\frac{1}{3}\right)^{11} \cdot \left(\frac{1}{3}\right)^9}{\left(\frac{1}{3}\right)^{11} \cdot \left(\frac{1}{3}\right)^{-2}}$$
$$\left(\frac{1}{3}\right)^{-8}$$

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

$$\frac{\left(\frac{1}{3}\right)^{-2} \cdot \left(\frac{1}{3}\right)^8 \cdot \left(\frac{1}{3}\right)^{-8}}{\left(\frac{1}{3}\right)^{-9}}$$
$$\left(\frac{1}{3}\right)^7$$

$$\frac{\left(\frac{1}{4}\right)^{-1} \cdot \left(\frac{1}{4}\right)^{-8} \cdot \left(\frac{1}{4}\right)^{-4}}{\left(\frac{1}{4}\right)^{11}}$$
$$\left(\frac{1}{4}\right)^{-24}$$

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

$$\frac{\left(\frac{1}{3}\right)^{-7} \cdot \left(\frac{1}{3}\right)^{-7} \cdot \left(\frac{1}{3}\right)^{-4} \cdot \left(\frac{1}{3}\right)^{-6}}{\left(\frac{1}{3}\right)^4 \cdot \left(\frac{1}{3}\right)^{-2}}$$
$$\left(\frac{1}{3}\right)^{-26}$$

$$\frac{\left(\frac{4}{9}\right)^8 \cdot \left(\frac{4}{9}\right) \cdot \left(\frac{4}{9}\right)^{-4} \cdot \left(\frac{4}{9}\right)^{-3}}{\left(\frac{4}{9}\right) \cdot \left(\frac{4}{9}\right)^{-3}}$$
$$\left(\frac{4}{9}\right)^4$$

$$\frac{\left(\frac{3}{5}\right)^7 \cdot \left(\frac{3}{5}\right)^5 \cdot \left(\frac{3}{5}\right)}{\left(\frac{3}{5}\right)^{13}}$$

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

$$\frac{\left(\frac{2}{5}\right)^{-1} \cdot \left(\frac{2}{5}\right)^2 \cdot \left(\frac{2}{5}\right)^{-5} \cdot \left(\frac{2}{5}\right)^9}{\left(\frac{2}{5}\right)^{-6} \cdot \left(\frac{2}{5}\right)^7}$$
$$\left(\frac{2}{5}\right)^4$$

$$\frac{\left(\frac{1}{6}\right)^{-6} \cdot \left(\frac{1}{6}\right)^{-7} \cdot \left(\frac{1}{6}\right)^{-10} \cdot \left(\frac{1}{6}\right)}{\left(\frac{1}{6}\right)^{-3} \cdot \left(\frac{1}{6}\right)^{-4}}$$
$$\left(\frac{1}{6}\right)^{-15}$$

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

$$\frac{\left(\frac{4}{9}\right)^{-5} \cdot \left(\frac{4}{9}\right)^{-10} \cdot \left(\frac{4}{9}\right)^4}{\left(\frac{4}{9}\right)^5}$$
$$\left(\frac{4}{9}\right)^{-16}$$

$$\frac{\left(\frac{3}{7}\right)^8 \cdot \left(\frac{3}{7}\right)^{11} \cdot \left(\frac{3}{7}\right)^6}{\left(\frac{3}{7}\right)^{-1}}$$
$$\left(\frac{3}{7}\right)^{26}$$