



## Vereinfachen von Bruchexponenten ( Division )

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

Datum: \_\_\_\_\_ Ergebnis: \_\_\_\_\_

$$\frac{\left(\frac{1}{3}\right)^{-2} \cdot \left(\frac{1}{3}\right)^{-7} \cdot \left(\frac{1}{3}\right)^9 \cdot \left(\frac{1}{3}\right)^{-5}}{\left(\frac{1}{3}\right)^{-4} \cdot \left(\frac{1}{3}\right)^6}$$

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

$$\frac{\left(\frac{4}{7}\right)^{-8} \cdot \left(\frac{4}{7}\right)^{11} \cdot \left(\frac{4}{7}\right)}{\left(\frac{4}{7}\right)^5}$$

$$\frac{\left(\frac{1}{6}\right)^{-5} \cdot \left(\frac{1}{6}\right)^{-8} \cdot \left(\frac{1}{6}\right)^{-7}}{\left(\frac{1}{6}\right)^2}$$

$$\frac{\left(\frac{3}{5}\right)^{-5} \cdot \left(\frac{3}{5}\right)^5 \cdot \left(\frac{3}{5}\right)^{11} \cdot \left(\frac{3}{5}\right)^{-1}}{\left(\frac{3}{5}\right)^5 \cdot \left(\frac{3}{5}\right)^{-10}}$$

$$\frac{\left(\frac{4}{5}\right)^2 \cdot \left(\frac{4}{5}\right)^2 \cdot \left(\frac{4}{5}\right)^{-10} \cdot \left(\frac{4}{5}\right)^6}{\left(\frac{4}{5}\right)^4 \cdot \left(\frac{4}{5}\right)^{-1}}$$

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

$$\frac{\left(\frac{4}{5}\right)^{-5} \cdot \left(\frac{4}{5}\right)^{-2} \cdot \left(\frac{4}{5}\right)^6}{\left(\frac{4}{5}\right)^{-3}}$$

$$\frac{\left(\frac{1}{9}\right) \cdot \left(\frac{1}{9}\right)^7 \cdot \left(\frac{1}{9}\right)^{-10} \cdot \left(\frac{1}{9}\right)^{-10}}{\left(\frac{1}{9}\right)^{-10} \cdot \left(\frac{1}{9}\right)^2}$$

$$\frac{\left(\frac{2}{3}\right)^{-4} \cdot \left(\frac{2}{3}\right)^7 \cdot \left(\frac{2}{3}\right)^{-4} \cdot \left(\frac{2}{3}\right)^3}{\left(\frac{2}{3}\right)^{11} \cdot \left(\frac{2}{3}\right)^{11}}$$

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

$$\frac{\left(\frac{1}{9}\right)^7 \cdot \left(\frac{1}{9}\right)^{-2} \cdot \left(\frac{1}{9}\right)^4 \cdot \left(\frac{1}{9}\right)^{11}}{\left(\frac{1}{9}\right) \cdot \left(\frac{1}{9}\right)^{-5}}$$

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

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

$$\left(\frac{1}{5}\right)^{-9} \cdot \left(\frac{1}{5}\right)^{10} \cdot \left(\frac{1}{5}\right)^3$$



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$$\frac{\left(\frac{1}{3}\right)^{-2} \cdot \left(\frac{1}{3}\right)^{-7} \cdot \left(\frac{1}{3}\right)^9 \cdot \left(\frac{1}{3}\right)^{-5}}{\left(\frac{1}{3}\right)^{-4} \cdot \left(\frac{1}{3}\right)^6}$$

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

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

$\left(\frac{1}{3}\right)^6$

$$\frac{\left(\frac{4}{7}\right)^{-8} \cdot \left(\frac{4}{7}\right)^{11} \cdot \left(\frac{4}{7}\right)}{\left(\frac{4}{7}\right)^5}$$

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

$$\frac{\left(\frac{1}{6}\right)^{-5} \cdot \left(\frac{1}{6}\right)^{-8} \cdot \left(\frac{1}{6}\right)^{-7}}{\left(\frac{1}{6}\right)^2}$$

$\left(\frac{1}{6}\right)^{-22}$

$$\frac{\left(\frac{3}{5}\right)^{-5} \cdot \left(\frac{3}{5}\right)^5 \cdot \left(\frac{3}{5}\right)^{11} \cdot \left(\frac{3}{5}\right)^{-1}}{\left(\frac{3}{5}\right)^5 \cdot \left(\frac{3}{5}\right)^{-10}}$$

$\left(\frac{3}{5}\right)^{15}$

$$\frac{\left(\frac{4}{5}\right)^2 \cdot \left(\frac{4}{5}\right)^2 \cdot \left(\frac{4}{5}\right)^{-10} \cdot \left(\frac{4}{5}\right)^6}{\left(\frac{4}{5}\right)^4 \cdot \left(\frac{4}{5}\right)^{-1}}$$

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

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

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

$$\frac{\left(\frac{4}{5}\right)^{-5} \cdot \left(\frac{4}{5}\right)^{-2} \cdot \left(\frac{4}{5}\right)^6}{\left(\frac{4}{5}\right)^{-3}}$$

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

$$\frac{\left(\frac{1}{9}\right) \cdot \left(\frac{1}{9}\right)^7 \cdot \left(\frac{1}{9}\right)^{-10} \cdot \left(\frac{1}{9}\right)^{-10}}{\left(\frac{1}{9}\right)^{-10} \cdot \left(\frac{1}{9}\right)^2}$$

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

$$\frac{\left(\frac{2}{3}\right)^{-4} \cdot \left(\frac{2}{3}\right)^7 \cdot \left(\frac{2}{3}\right)^{-4} \cdot \left(\frac{2}{3}\right)^3}{\left(\frac{2}{3}\right)^{11} \cdot \left(\frac{2}{3}\right)^{11}}$$

$\left(\frac{2}{3}\right)^{-20}$

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

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

$$\frac{\left(\frac{1}{9}\right)^7 \cdot \left(\frac{1}{9}\right)^{-2} \cdot \left(\frac{1}{9}\right)^4 \cdot \left(\frac{1}{9}\right)^{11}}{\left(\frac{1}{9}\right) \cdot \left(\frac{1}{9}\right)^{-5}}$$

$\left(\frac{1}{9}\right)^{24}$

$$\frac{\left(\frac{3}{5}\right)^{-5} \cdot \left(\frac{3}{5}\right)^{-2} \cdot \left(\frac{3}{5}\right)^7}{\left(\frac{3}{5}\right)^0}$$

$\left(\frac{3}{5}\right)^0$

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

$\left(\frac{2}{9}\right)^{-16}$

$$\frac{\left(\frac{1}{5}\right)^{-9} \cdot \left(\frac{1}{5}\right)^{10} \cdot \left(\frac{1}{5}\right)^3}{\left(\frac{1}{5}\right)^4}$$

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