



Vereinfachen von Bruchexponenten (Division)

Name: _____

Datum: _____ Ergebnis: _____

$$\frac{\left(\frac{4}{9}\right)^7 \cdot \left(\frac{4}{9}\right)^{-5} \cdot \left(\frac{4}{9}\right)^{-10}}{\left(\frac{4}{9}\right)^{-5}}$$

$$\frac{\left(\frac{1}{2}\right)^9 \cdot \left(\frac{1}{2}\right) \cdot \left(\frac{1}{2}\right)^{10} \cdot \left(\frac{1}{2}\right)^{-6}}{\left(\frac{1}{2}\right)^6 \cdot \left(\frac{1}{2}\right)^7}$$

$$\frac{\left(\frac{1}{2}\right)^{-5} \cdot \left(\frac{1}{2}\right)^4 \cdot \left(\frac{1}{2}\right)^{10} \cdot \left(\frac{1}{2}\right)^{11}}{\left(\frac{1}{2}\right) \cdot \left(\frac{1}{2}\right)^{10}}$$

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

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

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

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

$$\frac{\left(\frac{1}{8}\right)^{-9} \cdot \left(\frac{1}{8}\right)^9 \cdot \left(\frac{1}{8}\right)^{-10} \cdot \left(\frac{1}{8}\right)^3}{\left(\frac{1}{8}\right)^3 \cdot \left(\frac{1}{8}\right)^{-6}}$$

$$\left(\frac{3}{8}\right)^9 \cdot \left(\frac{3}{8}\right)^{11} \cdot \left(\frac{3}{8}\right)^4$$

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

$$\frac{\left(\frac{1}{3}\right)^{11} \cdot \left(\frac{1}{3}\right)^{-4} \cdot \left(\frac{1}{3}\right)^{-3}}{\left(\frac{1}{3}\right)^{10}}$$

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

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

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

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



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$$\frac{\left(\frac{4}{9}\right)^7 \cdot \left(\frac{4}{9}\right)^{-5} \cdot \left(\frac{4}{9}\right)^{-10}}{\left(\frac{4}{9}\right)^{-5}}$$

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

$$\frac{\left(\frac{1}{2}\right)^9 \cdot \left(\frac{1}{2}\right) \cdot \left(\frac{1}{2}\right)^{10} \cdot \left(\frac{1}{2}\right)^{-6}}{\left(\frac{1}{2}\right)^6 \cdot \left(\frac{1}{2}\right)^7}$$

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

$$\frac{\left(\frac{1}{2}\right)^{-5} \cdot \left(\frac{1}{2}\right)^4 \cdot \left(\frac{1}{2}\right)^{10} \cdot \left(\frac{1}{2}\right)^{11}}{\left(\frac{1}{2}\right) \cdot \left(\frac{1}{2}\right)^{10}}$$

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

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

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

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

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

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

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

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

$$\left(\frac{1}{9}\right)^{10}$$

$$\frac{\left(\frac{1}{8}\right)^{-9} \cdot \left(\frac{1}{8}\right)^9 \cdot \left(\frac{1}{8}\right)^{-10} \cdot \left(\frac{1}{8}\right)^3}{\left(\frac{1}{8}\right)^3 \cdot \left(\frac{1}{8}\right)^{-6}}$$

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

$$\left(\frac{3}{8}\right)^9 \cdot \left(\frac{3}{8}\right)^{11} \cdot \left(\frac{3}{8}\right)^4$$

$$\left(\frac{3}{8}\right)^{24}$$

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

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

$$\frac{\left(\frac{1}{3}\right)^{11} \cdot \left(\frac{1}{3}\right)^{-4} \cdot \left(\frac{1}{3}\right)^{-3}}{\left(\frac{1}{3}\right)^{10}}$$

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

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

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

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

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

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

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

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

$$\left(\frac{1}{3}\right)^4$$