



Vereinfachen von Bruchexponenten (Division)

Name: _____

Datum: _____ Ergebnis: _____

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

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

$$\frac{\left(\frac{1}{5}\right)^9 \cdot \left(\frac{1}{5}\right)^7 \cdot \left(\frac{1}{5}\right)^{10} \cdot \left(\frac{1}{5}\right)^{-4}}{\left(\frac{1}{5}\right)^9 \cdot \left(\frac{1}{5}\right)^8}$$

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

$$\frac{\left(\frac{1}{6}\right)^{-4} \cdot \left(\frac{1}{6}\right)^{11} \cdot \left(\frac{1}{6}\right)^{-2}}{\left(\frac{1}{6}\right)^{-7}}$$

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

$$\frac{\left(\frac{1}{7}\right)^5 \cdot \left(\frac{1}{7}\right)^{10} \cdot \left(\frac{1}{7}\right)^{-7} \cdot \left(\frac{1}{7}\right)^3}{\left(\frac{1}{7}\right)^{-6} \cdot \left(\frac{1}{7}\right)^{-9}}$$

$$\frac{\left(\frac{4}{9}\right)^9 \cdot \left(\frac{4}{9}\right)^{-8} \cdot \left(\frac{4}{9}\right)^{-2} \cdot \left(\frac{4}{9}\right)^{-2}}{\left(\frac{4}{9}\right)^{-2} \cdot \left(\frac{4}{9}\right)^{-5}}$$

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

$$\frac{\left(\frac{1}{3}\right)^{-1} \cdot \left(\frac{1}{3}\right)^{-5} \cdot \left(\frac{1}{3}\right)^{11}}{\left(\frac{1}{3}\right)^{-4}}$$

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

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

$$\frac{\left(\frac{1}{6}\right)^8 \cdot \left(\frac{1}{6}\right)^6 \cdot \left(\frac{1}{6}\right)^9 \cdot \left(\frac{1}{6}\right)^5}{\left(\frac{1}{6}\right)^{-2} \cdot \left(\frac{1}{6}\right)^{10}}$$

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

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



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$$\frac{\left(\frac{3}{5}\right)^{-1} \cdot \left(\frac{3}{5}\right)^{-5} \cdot \left(\frac{3}{5}\right)^{-10}}{\left(\frac{3}{5}\right)^{-16}}$$

$$\frac{\left(\frac{2}{5}\right)^5 \cdot \left(\frac{2}{5}\right)^8 \cdot \left(\frac{2}{5}\right)^9}{\left(\frac{2}{5}\right)^{22}}$$

$$\frac{\left(\frac{1}{5}\right)^9 \cdot \left(\frac{1}{5}\right)^7 \cdot \left(\frac{1}{5}\right)^{10} \cdot \left(\frac{1}{5}\right)^{-4}}{\left(\frac{1}{5}\right)^9 \cdot \left(\frac{1}{5}\right)^8} \left(\frac{1}{5}\right)^5$$

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

$$\frac{\left(\frac{1}{6}\right)^{-4} \cdot \left(\frac{1}{6}\right)^{11} \cdot \left(\frac{1}{6}\right)^{-2}}{\left(\frac{1}{6}\right)^{-7}} \left(\frac{1}{6}\right)^{12}$$

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

$$\frac{\left(\frac{1}{7}\right)^5 \cdot \left(\frac{1}{7}\right)^{10} \cdot \left(\frac{1}{7}\right)^{-7} \cdot \left(\frac{1}{7}\right)^3}{\left(\frac{1}{7}\right)^{-6} \cdot \left(\frac{1}{7}\right)^{-9}} \left(\frac{1}{7}\right)^{26}$$

$$\frac{\left(\frac{4}{9}\right)^9 \cdot \left(\frac{4}{9}\right)^{-8} \cdot \left(\frac{4}{9}\right)^{-2} \cdot \left(\frac{4}{9}\right)^{-2}}{\left(\frac{4}{9}\right)^{-2} \cdot \left(\frac{4}{9}\right)^{-5}} \left(\frac{4}{9}\right)^4$$

$$\frac{\left(\frac{1}{2}\right)^{-3} \cdot \left(\frac{1}{2}\right)^6 \cdot \left(\frac{1}{2}\right)^6 \cdot \left(\frac{1}{2}\right)^{-9}}{\left(\frac{1}{2}\right)^{11} \cdot \left(\frac{1}{2}\right)^{11}} \left(\frac{1}{2}\right)^{-22}$$

$$\frac{\left(\frac{1}{3}\right)^{-1} \cdot \left(\frac{1}{3}\right)^{-5} \cdot \left(\frac{1}{3}\right)^{11}}{\left(\frac{1}{3}\right)^{-4}} \left(\frac{1}{3}\right)^9$$

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

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

$$\frac{\left(\frac{1}{6}\right)^8 \cdot \left(\frac{1}{6}\right)^6 \cdot \left(\frac{1}{6}\right)^9 \cdot \left(\frac{1}{6}\right)^5}{\left(\frac{1}{6}\right)^{-2} \cdot \left(\frac{1}{6}\right)^{10}} \left(\frac{1}{6}\right)^{20}$$

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

$$\frac{\left(\frac{3}{5}\right)^{-4} \cdot \left(\frac{3}{5}\right)^{-6} \cdot \left(\frac{3}{5}\right)^{-3}}{\left(\frac{3}{5}\right)^{-13}} \left(\frac{3}{5}\right)^{-13}$$