



Yksinkertaistavat murto -osuudet (jako)

Nimi: _____

Päivämäärä: _____ Pisteet: _____

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

$$\frac{\left(\frac{3}{5}\right)^8 \cdot \left(\frac{3}{5}\right)^2 \cdot \left(\frac{3}{5}\right)^4 \cdot \left(\frac{3}{5}\right)^2}{\left(\frac{3}{5}\right)^{-6} \cdot \left(\frac{3}{5}\right)^{-8}}$$

$$\frac{\left(\frac{1}{7}\right)^8 \cdot \left(\frac{1}{7}\right)^9 \cdot \left(\frac{1}{7}\right)^6}{\left(\frac{1}{7}\right)^9}$$

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

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

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

$$\frac{\left(\frac{1}{2}\right)^4 \cdot \left(\frac{1}{2}\right)^{-3} \cdot \left(\frac{1}{2}\right) \cdot \left(\frac{1}{2}\right)^{11}}{\left(\frac{1}{2}\right)^9 \cdot \left(\frac{1}{2}\right)^{-5}}$$

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

$$\left(\frac{1}{6}\right)^{11} \cdot \left(\frac{1}{6}\right)^{-2} \cdot \left(\frac{1}{6}\right)^{10}$$

$$\frac{\left(\frac{3}{8}\right)^7 \cdot \left(\frac{3}{8}\right)^5 \cdot \left(\frac{3}{8}\right)^{-3} \cdot \left(\frac{3}{8}\right)^{-9}}{\left(\frac{3}{8}\right)^{-4} \cdot \left(\frac{3}{8}\right)^7}$$

$$\frac{\left(\frac{1}{9}\right)^8 \cdot \left(\frac{1}{9}\right)^{-7} \cdot \left(\frac{1}{9}\right)^5 \cdot \left(\frac{1}{9}\right)^4}{\left(\frac{1}{9}\right)^4 \cdot \left(\frac{1}{9}\right)^{-3}}$$

$$\frac{\left(\frac{1}{3}\right)^2 \cdot \left(\frac{1}{3}\right)^{-4} \cdot \left(\frac{1}{3}\right)^{-10} \cdot \left(\frac{1}{3}\right)^4}{\left(\frac{1}{3}\right)^6 \cdot \left(\frac{1}{3}\right)^9}$$

$$\frac{\left(\frac{1}{7}\right)^8 \cdot \left(\frac{1}{7}\right)^7 \cdot \left(\frac{1}{7}\right)^{-3} \cdot \left(\frac{1}{7}\right)^7}{\left(\frac{1}{7}\right)^5 \cdot \left(\frac{1}{7}\right)^{-9}}$$

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

$$\left(\frac{3}{7}\right)^{10} \cdot \left(\frac{3}{7}\right)^{-2} \cdot \left(\frac{3}{7}\right)^9$$



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$$\frac{\left(\frac{1}{5}\right)^{-9} \cdot \left(\frac{1}{5}\right) \cdot \left(\frac{1}{5}\right)^{-10} \cdot \left(\frac{1}{5}\right)^{-1}}{\left(\frac{1}{5}\right)^{-2} \cdot \left(\frac{1}{5}\right)^{-2}} \quad \left(\frac{1}{5}\right)^{-15}$$

$$\frac{\left(\frac{3}{5}\right)^8 \cdot \left(\frac{3}{5}\right)^2 \cdot \left(\frac{3}{5}\right)^4 \cdot \left(\frac{3}{5}\right)^2}{\left(\frac{3}{5}\right)^{-6} \cdot \left(\frac{3}{5}\right)^{-8}} \quad \left(\frac{3}{5}\right)^{30}$$

$$\frac{\left(\frac{1}{7}\right)^8 \cdot \left(\frac{1}{7}\right)^9 \cdot \left(\frac{1}{7}\right)^6}{\left(\frac{1}{7}\right)^9} \quad \left(\frac{1}{7}\right)^{14}$$

$$\frac{\left(\frac{4}{9}\right)^7 \cdot \left(\frac{4}{9}\right)^2 \cdot \left(\frac{4}{9}\right)^3}{\left(\frac{4}{9}\right)^{-5}} \quad \left(\frac{4}{9}\right)^{17}$$

$$\frac{\left(\frac{1}{2}\right)^{-9} \cdot \left(\frac{1}{2}\right)^{-5} \cdot \left(\frac{1}{2}\right)}{\left(\frac{1}{2}\right)^6} \quad \left(\frac{1}{2}\right)^{-19}$$

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

$$\frac{\left(\frac{1}{2}\right)^4 \cdot \left(\frac{1}{2}\right)^{-3} \cdot \left(\frac{1}{2}\right) \cdot \left(\frac{1}{2}\right)^{11}}{\left(\frac{1}{2}\right)^9 \cdot \left(\frac{1}{2}\right)^{-5}} \quad \left(\frac{1}{2}\right)^9$$

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

$$\frac{\left(\frac{1}{6}\right)^{11} \cdot \left(\frac{1}{6}\right)^{-2} \cdot \left(\frac{1}{6}\right)^{10}}{\left(\frac{1}{6}\right)^{19}} \quad \left(\frac{1}{6}\right)^{19}$$

$$\frac{\left(\frac{3}{8}\right)^7 \cdot \left(\frac{3}{8}\right)^5 \cdot \left(\frac{3}{8}\right)^{-3} \cdot \left(\frac{3}{8}\right)^{-9}}{\left(\frac{3}{8}\right)^{-4} \cdot \left(\frac{3}{8}\right)^7} \quad \left(\frac{3}{8}\right)^{-3}$$

$$\frac{\left(\frac{1}{9}\right)^8 \cdot \left(\frac{1}{9}\right)^{-7} \cdot \left(\frac{1}{9}\right)^5 \cdot \left(\frac{1}{9}\right)^4}{\left(\frac{1}{9}\right)^4 \cdot \left(\frac{1}{9}\right)^{-3}} \quad \left(\frac{1}{9}\right)^9$$

$$\frac{\left(\frac{1}{3}\right)^2 \cdot \left(\frac{1}{3}\right)^{-4} \cdot \left(\frac{1}{3}\right)^{-10} \cdot \left(\frac{1}{3}\right)^4}{\left(\frac{1}{3}\right)^6 \cdot \left(\frac{1}{3}\right)^9} \quad \left(\frac{1}{3}\right)^{-23}$$

$$\frac{\left(\frac{1}{7}\right)^8 \cdot \left(\frac{1}{7}\right)^7 \cdot \left(\frac{1}{7}\right)^{-3} \cdot \left(\frac{1}{7}\right)^7}{\left(\frac{1}{7}\right)^5 \cdot \left(\frac{1}{7}\right)^{-9}} \quad \left(\frac{1}{7}\right)^{23}$$

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

$$\frac{\left(\frac{3}{7}\right)^{10} \cdot \left(\frac{3}{7}\right)^{-2} \cdot \left(\frac{3}{7}\right)^9}{\left(\frac{3}{7}\right)^{17}} \quad \left(\frac{3}{7}\right)^{17}$$