

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

$$\left(\frac{2}{3}\right)^4 \cdot \left(\frac{3}{2}\right)^4 =$$

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

$$3^2 + 3^4 =$$

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

$$3^2 \cdot 3^4 =$$

$$\left(\frac{a}{2}\right)^2 =$$

$$\frac{3^2}{3^4} =$$

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

$$(3^2)^4 =$$

$$3 \cdot 10^{-1} =$$

$$3^{2^4} =$$

$$(3 \cdot 10)^{-1} =$$

$$(0,4)^3 \cdot 5^3 =$$

$$\frac{2^4}{2^{-4}} =$$

$$\frac{2,7^4}{0,9^4} =$$

$$\frac{2^3}{\left(\frac{1}{2}\right)^4} =$$

$$\frac{4^{-3}}{4^{-4}} =$$

$$(x \cdot y)^2 =$$

$$\frac{4^{-4}}{4^{-3}} =$$

$$(x + y)^2 =$$

$$3^{-2} =$$

$$4^{-4} \cdot 4^{-3} =$$

$$(-3)^2 =$$

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

$$-3^2 =$$

$$(-3)^{-2} =$$

$$\left(\frac{3}{5}\right)^{-8} =$$

$$(0,5)^4 =$$

$$\left(\frac{6}{10}\right)^{-8} =$$

$$(0,5)^{-2} =$$

$$(2^{-2})^3 =$$

$$\frac{\left(\frac{1}{5}\right)^2}{5^{-1}} =$$

$$(2^3)^{-2} =$$

$$(2^0)^{-1} =$$

$$\frac{\left(\frac{1}{5}\right)^{-2}}{5} =$$

$$(2^{-1})^0 =$$

$$(2^2)^3 =$$

$$2^4 + 2^5 =$$

$$2^{(2^3)} =$$

$$2^4 - 2^5 =$$

Bestimme die Lösungsmengen bzw. gib gegebenenfalls die wahren Einsetzungen für die Variable x an!

$$\left(\frac{1}{2}\right)^x = 8 \qquad (-1)^x = -1$$

$$10^x = \frac{1}{1000} \qquad -2^x = 16$$

$$\left(\frac{3}{2}\right)^x = 2,25 \qquad x^2 = 64$$

$$\left(-\frac{1}{3}\right)^x = 27 \qquad (-2)^x = 16$$

$$(-1)^x = 1 \qquad \left(-\frac{1}{5}\right)^x = 25$$

$$\left(\frac{11}{8}\right)^x = \frac{8}{11} \qquad (-x)^3 = -64$$

$$4^x = \frac{1}{256} \qquad x^4 = 81$$

$$1^x = 1 \qquad (2^3)^x = 64$$

$$10^x = 1 \qquad (2^x)^2 = \frac{1}{256}$$

$$1 \text{ km} = 10^x \text{ mm}$$

$$1 \text{ mg} = 10^x \text{ g}$$

$$1 \text{ mm}^3 = 10^x \text{ l}$$

$$1 \text{ nF} = 10^x \text{ F}$$

$$1 \text{ t} = 10^x \text{ g}$$

$$1 \text{ GB} = 10^x \text{ B}$$

$$0,08 = 8 \cdot 10^x$$

$$4711 = 0,4711 \cdot 10^x$$

Berechne:

$$\left(-\frac{1}{3}\right)^4 \cdot 3^{-4} = \quad ; \quad \frac{2^4 + 2^6}{2^4} = \quad ; \quad \frac{2^4 \cdot 2^6}{2^4} = \quad ; \quad \left(-\frac{2}{3}\right)^{-2} \cdot \left(\frac{6}{8}\right)^4 =$$

$$\frac{\left(\frac{1}{5}\right)^2}{5^{-3}} = \quad ; \quad \frac{2^3}{\left(\frac{1}{2}\right)^4} = \quad ; \quad \frac{4^3 + 4^5}{4^6} = \quad ; \quad \frac{x^3 - x^2}{x^2} =$$

$$\frac{14^5 + 14^6}{14^4 + 14^4} = \quad ; \quad 3^{-4} \cdot 3^3 \cdot \left(\frac{1}{3}\right)^2 \cdot 3^{-2} \cdot \left(\frac{1}{3}\right)^{-5} =$$