

Aufgabe 5

- a) $\sqrt[3]{8} = 2$, weil $3^3 = 8$
- b) $\sqrt[3]{125} = 5$, weil $5^3 = 125$
- c) $\sqrt[4]{81} = 3$, weil $3^4 = 81$
- d) $\sqrt[4]{10.000} = 10$, weil $10^4 = 10.000$
- e) $\sqrt[5]{32} = 2$, weil $2^5 = 32$
- f) $\sqrt[5]{1024} = 4$, weil $4^5 = 1024$
- g) $\sqrt{1024} = 32$, weil $32^2 = 1024$
- h) $\sqrt[3]{216} = 6$, weil $6^3 = 216$
- i) $\sqrt{0,01} = 0,1$, weil $0,1^2 = 0,01$
- j) $\sqrt[3]{0,001} = 0,1$, weil $0,1^3 = 0,001$
- k) $\sqrt[3]{0,027} = 0,3$, weil $0,3^3 = 0,027$
- l) $\sqrt[3]{64} = 4$, weil $4^3 = 64$

Aufgabe 6

- a) $16^{\frac{1}{2}} = \sqrt{16} = 4$, weil $4^2 = 16$
- b) $625^{\frac{1}{2}} = \sqrt{625} = 25$, weil $25^2 = 625$
- c) $625^{\frac{1}{4}} = \sqrt[4]{625} = 5$, weil $5^4 = 625$

d) $1000^{\frac{1}{3}} = \sqrt[3]{1000} = 10$, weil $10^3 = 1000$

e) $27^{\frac{1}{3}} = \sqrt[3]{27} = 3$, weil $3^3 = 27$

f) $32^{\frac{1}{5}} = \sqrt[5]{32} = 2$, weil $2^5 = 32$

Aufgabe 7

a) $4^{0,5} = 4^{\frac{1}{2}} = \sqrt{4} = 2$, weil $2^2 = 4$

b) $32^{0,2} = 32^{\frac{2}{10}} = 32^{\frac{1}{5}} = \sqrt[5]{32} = 2$, weil $2^5 = 32$

c) $81^{0,25} = 81^{\frac{1}{4}} = \sqrt[4]{81} = 3$, weil $3^4 = 81$

d) $256^{0,125} = 256^{\frac{1}{8}} = \sqrt[8]{256} = 2$, weil $2^8 = 256$

e) $625^{0,25} = 625^{\frac{1}{4}} = \sqrt[4]{625} = 5$, weil $5^4 = 625$

f) $1024^{0,1} = 1024^{\frac{1}{10}} = \sqrt[10]{1024} = 2$, weil $2^{10} = 1024$