

**Zusammenfassung: Potenzschreibweise, Potenzrechnung, Potenzgesetze**

|                                 |  |
|---------------------------------|--|
| $a^0 = 1$                       | $5^0 = 1$                                    |
| $a^1 = a$                       | $5^1 = 5$                                    |
| $a^{-1} = 1/a$                  | $5^{-1} = 1/5$                               |
| $a^{-n} = 1/a^n$                | $5^{-2} = 1/5^2 = 1/25$                      |
| $a^m \cdot a^n = a^{m+n}$       | $5^2 \cdot 5^3 = 5^5 = 3125$                 |
| $a^m : a^n = a^{m-n}$           | $5^6 : 5^4 = 5^2 = 25$                       |
| $a^m \cdot b^m = (a \cdot b)^m$ | $5^2 \cdot 4^2 = (5 \cdot 4)^2 = 20^2 = 400$ |
| $a^m : b^m = (a : b)^m$         | $6^2 : 3^2 = (6 : 3)^2 = 2^2 = 4$            |
| $(a^m)^n = a^{m \cdot n}$       | $(5^2)^3 = 5^{2 \cdot 3} = 5^6 = 15625$      |

$$1\text{mm} = 1 \cdot 10^{-3}\text{m}$$

$$1\text{km} = 1 \cdot 10^3\text{m}$$

$$1\mu\text{m} = 1 \cdot 10^{-6}\text{m}$$

$$1\text{Mm} = 1 \cdot 10^6\text{m}$$

$$1\text{nm} = 1 \cdot 10^{-9}\text{m}$$

$$1\text{Gm} = 1 \cdot 10^9\text{m}$$

$$1\text{pm} = 10^{-12}\text{m}$$

$$1\text{Tm} = 1 \cdot 10^{12}\text{m}$$

### Abkürzungen:

mm = Millimeter

km = Kilometer

$\mu\text{m}$  = Mikrometer

Mm = Megameter

nm = Nanometer

Gm = Gigameter

pm = Pikometer

Tm = Terameter