

1 Potenzen

Englische Aufgaben

- 1.1** These are the first four powers of 3: 3, 9, 27, 81.
- What is the next power of 3?
 - Find the 10th power of 3.
 - What power of 3 is equal to 177147?
- 1.2** Work out $3^5 \times 3^7$. Give the answer as a power of 9.
- 1.3** Simplify the following expressions using the index laws.
- $(6a^5 \div 3a^2) + (2a^2 \cdot 8a) =$
 - $(3b^{-5})^{-7} \cdot b^6 =$
 - $(x^7 \cdot x^2) \left((x^{-3} \cdot x^8) \cdot x^9 \right) \cdot x^{-4} =$
- [index laws ... Rechenregeln für Potenzen]
- 1.4** Simplify and give your answer as a fractional index.
- $\sqrt{g^3} \cdot \sqrt[6]{g^4} =$
 - $\frac{\sqrt[4]{x^5}}{\sqrt[3]{x^7}} =$
- [fractional index ... rationale Potenz]
- 1.5** Convert 30° Centigrade to Fahrenheit using the formula: $C = (F - 32) \div 1.8$
- 1.6** Rearrange the formulae to give b in terms of c. $\frac{b+c}{3} + c = b$
- [to rearrange ... umformen; in terms of ... bezüglich]
- 1.7** A rectangle has the following measures in centimetres: length - $(3c + 7)$, width - $2c$. The radius of a circle is R cm. The areas of the rectangle and the circle are equal. Express R in terms of c.
- [rectangle ... Rechteck; area ... Flächeninhalt; equal ... gleich]