

Übungen

Formelsammlung

Mögliche Lösungen

1.

a) $\frac{a}{\sqrt[3]{b^{10}}\sqrt{c}}$

b) $1 + \frac{11}{2} \lg a + \frac{13}{2} \lg b$

c) $ab - 3ab\sqrt[3]{ab} + 3ab\sqrt[3]{a^2b^2} - a^2b^2$

2.

a) $x_{1/2} = \frac{2 \pm \sqrt{43}}{3}$

b) $x = \frac{4}{3}$

c) $x = 205$

d) $x_{1/2} = \pm 2 \quad x_{3/4} = \pm 3$

3.

a) Andere Kathete 9 cm; $A = 54 \text{ cm}^2$

b) $a = \sqrt{40\sqrt{3}}$; $h = \sqrt{30\sqrt{3}}$

c) $A = 36 \text{ cm}^2$; $u = 24 \text{ cm}$; $\alpha = 114,6^\circ$

d) $r = 3 \text{ m}$

e) $V = \frac{16}{3} \sqrt{2} \text{ cm}^3$; $O = 16\sqrt{3} \text{ cm}^2$ ($V = \frac{64}{3} \sqrt{2} \text{ cm}^3$; $O = 32\sqrt{3} \text{ cm}^2$)

4.

a) 293

b) 213

c) $k = \frac{1}{720}$; $B(2) = 181,25$; $B(3) = 211,1$; $B(4) = 237,2$

d) 240

5.

a) $\frac{12}{95}$

b) $\frac{3}{10}$

c) $\left(\frac{2}{3}\right)^{10}$; $1 - \left(\frac{2}{3}\right)^{10}$; 18 mal