

Trapez – Textaufgaben

Lösungsblatt

$$1) A = \frac{(a+c) \cdot h}{2} = \frac{(8+14) \cdot 5}{2} = \frac{22 \cdot 5}{2} = \frac{110}{2} = \mathbf{55m^2}$$

$$2) A_{Trapez} = \frac{(a+c) \cdot h}{2} = \frac{(160+130) \cdot 40}{2} = \frac{290 \cdot 40}{2} = \frac{11\,600}{2} = \mathbf{5\,800m^2}$$

$$A_{Rechteck} = l \cdot b$$

$$5\,800 = l \cdot 40 \quad / : 40$$

$$l = 5\,800 : 40 = \mathbf{145m}$$

$$3) 177\,100 : 110 = \mathbf{1\,610m^2}$$

$$A = \frac{(a+x) \cdot h}{2}$$

$$1\,610 = \frac{(42+x) \cdot 46}{2} \quad / \cdot 2$$

$$3\,220 = (42+x) \cdot 46 \quad / : 46$$

$$70 = 42+x \quad / - 42$$

$$x = \mathbf{28m}$$

$$4) A_{Trapez} = \frac{(12+3) \cdot 5,8}{2} = \frac{15 \cdot 5,8}{2} = \frac{87}{2} = 43,5m^2$$

$$A_{Dreieck} = \frac{c \cdot h_c}{2} = \frac{9 \cdot 5,8}{2} = \frac{52,2}{2} = 26,1m^2$$

$$A = 2 \cdot A_{Trapez} + 2 \cdot A_{Rechteck} = 2 \cdot 43,5 + 2 \cdot 26,1 = 87 + 52,2 = \mathbf{139,2m^2}$$

$$\text{Dachziegel: } 139,2 \cdot 10 = 1\,390 \quad 1\,390 \cdot 1,05 = 1\,459,5 \approx \mathbf{1\,460 \text{ Dachziegel}}$$

$$\text{Kosten: } 1\,460 \cdot 1,32 = 1\,927,20 \quad 1\,927,20 \cdot 0,95 = \mathbf{1\,830,84 \text{ €}}$$