

## Quadratische Gleichungen Aufgabe 130

Die rote Fläche 17,32 cm<sup>2</sup> groß. Wie groß ist x?

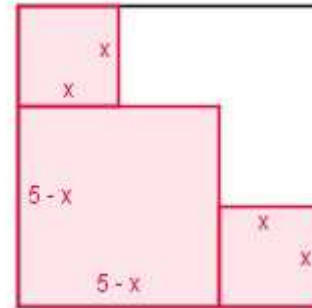
$$(5 - x)^2 + 2 * x^2 = 17,32$$

$$25 - 10x + x^2 + 2x^2 = 17,32 \quad | -17,32$$

$$3x^2 - 10x + 7,68 = 0$$

A, B, C - Formel

$$A = 3 ; B = -10 ; C = 7,68$$



$$x_{1,2} = \frac{-(-10) \pm \sqrt{(-10)^2 - 4 * 3 * 7,68}}{2 * 3}$$

$$x_{1,2} = \frac{10 \pm \sqrt{100 - 92,16}}{6}$$

$$x_{1,2} = \frac{10 \pm \sqrt{7,84}}{6}$$

$$x_{1,2} = \frac{10 \pm 2,8}{6}$$

$$x_1 = \frac{10 + 2,8}{6} = \frac{12,8}{6} = 2,1 \text{ cm oder}$$

$$x_2 = \frac{10 - 2,8}{6} = \frac{7,2}{6} = 1,2 \text{ cm}$$