



$$\frac{b^2}{3} = \frac{b^2}{4} + \left(8 - \frac{b}{2}\right)^2$$

$$\frac{b^2}{3} = \frac{b^2}{4} + 64 - 8b + \frac{b^2}{4} \quad | \cdot 12$$

$$4b^2 = 3b^2 + 768 - 96b + 3b^2 \quad | -4b^2$$

$$2b^2 - 96b + 768 = 0 \quad | :2$$

$$b^2 - 48b + 384 = 0$$

p, q - Formel

$$p = -48 ; q = 384$$

$$b_{1,2} = \frac{-(-48)}{2} \pm \sqrt{\left(\frac{-48}{2}\right)^2 - 384}$$

$$b_{1,2} = 24 \pm \sqrt{576 - 384}$$

$$b_{1,2} = 24 \pm \sqrt{192}$$

$$b_{1,2} = 24 \pm 13,9$$

$$b_1 = 24 + 13,9 = 37,9 \text{ cm keine Lösung} > 2 * a = 16 \text{ cm}$$

$$\mathbf{b_2 = 24 - 13,9 = 10,1 \text{ cm}}$$