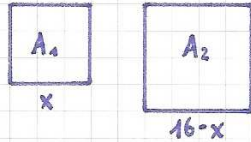


FLÄCHENBERECHNUNGEN : SPEZIELLE AUFGABEN ( „ALGEBRAISCHE LÖSUNG NOTIG“ )

Nr 1



Quadrat 2 ist größer - Also :

$$A_2 - A_1 = 128 \text{ cm}^2$$

$$(16-x)^2 - x^2 = 128 \quad | \text{TV} \quad (\text{BINOMISCHE FORMEL})$$

$$256 - 32x + x^2 - x^2 = 128 \quad | \text{TV}$$

$$256 - 32x = 128 \quad | +32x - 128$$

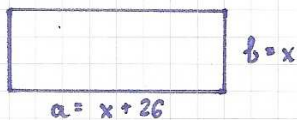
$$-128 = 32x \quad | : 32$$

$$4 = x$$

Also :  $x = \underline{4 \text{ cm}} = s_1$

$16-x = \underline{12 \text{ cm}} = s_2$

Nr 2



$$U = 2 \cdot a + 2 \cdot b$$

$$420 = 2 \cdot (x+26) + 2 \cdot x \quad | \text{TV}$$

$$420 = 2x + 52 + 2x \quad | \text{TV}$$

$$420 = 4x + 52 \quad | -52$$

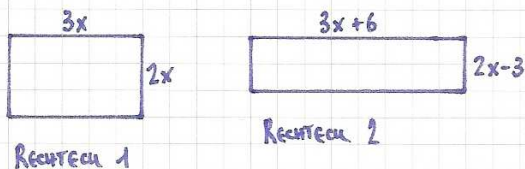
$$368 = 4x \quad | : 4$$

$$92 = x$$

$a = \underline{118 \text{ cm}}$

$b = \underline{92 \text{ cm}}$

Nr 3



$$3x \cdot 2x = (3x+6) \cdot (2x-3) \quad | \text{TV}$$

$$6x^2 = 6x^2 - 9x + 12x - 18 \quad | \text{TV}$$

$$6x^2 = 6x^2 + 3x - 18 \quad | -6x^2$$

$$0 = 3x - 18 \quad | +18$$

$$18 = 3x \quad | : 3$$

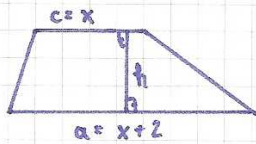
$$6 = x$$

a)  $l = 3x = \underline{18 \text{ cm}}$

$b = 2x = \underline{12 \text{ cm}}$

b)  $A = l \cdot b = \underline{216 \text{ cm}^2}$

Nr 4



$$A = 12,6 \text{ cm}^2$$

$$h = 3,5 \text{ cm}$$

$$a) A = m \cdot h \quad | : h$$

$$A : h = m$$

$$3,6 \text{ cm} = m$$

... im Text steht: „a ist um 2 cm grösser!“

$$b) m = \frac{a+c}{2}$$

$$m = \frac{x+2+x}{2} \quad | \cdot 2$$

$$2 \cdot 3,6 = x+2+x \quad | \text{ TU}$$

$$7,2 = 2x+2 \quad | -2$$

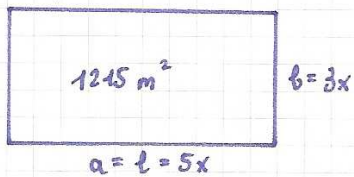
$$5,2 = 2x \quad | : 2$$

$$2,6 = x$$

und somit:  $a = 4,6 \text{ cm}$

$c = 2,6 \text{ cm}$

Nr 5



$$A = a \cdot b \quad | \text{ TU}$$

$$1215 = 5x \cdot 3x \quad | \text{ TU}$$

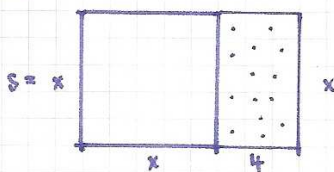
$$1215 = 15x^2 \quad | : 15$$

$$81 = x^2 \quad | \sqrt{\quad}$$

$$9 = x$$

also ist:  $a = 45 \text{ m}, b = 27 \text{ m}$

Nr 6



$$A_{\text{small}} = 20 \text{ cm}^2$$

$$4 \cdot x = 20 \quad | : 4$$

$$x = 5 \text{ cm}$$

also: ursprüngliche Quadratseite:

$s = x = 5 \text{ cm}$