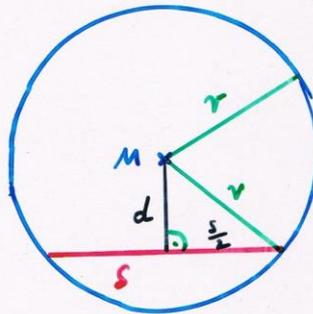


S. 47/14a



geg.: $r = 10 \text{ cm}$

$s = 12 \text{ cm}$

ges.: d

$$r^2 = d^2 + \left(\frac{s}{2}\right)^2 \Rightarrow$$

$$d^2 = r^2 - \frac{s^2}{4} = (10 \text{ cm})^2 - \left(\frac{12}{2} \text{ cm}\right)^2 = 100 \text{ cm}^2 - 36 \text{ cm}^2 = 64 \text{ cm}^2$$

$$\Rightarrow d = \sqrt{64 \text{ cm}^2} = 8 \text{ cm}$$

14b, geg.: $r = 25 \text{ cm}$; $d = 14 \text{ mm} = 1,4 \text{ cm}$

ges.: s

$$\left(\frac{s}{2}\right)^2 = r^2 - d^2 = 625 \text{ cm}^2 - 1,96 \text{ cm}^2 = \frac{15576}{25} \text{ cm}^2$$

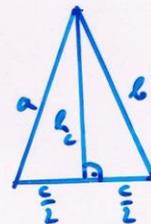
$$\frac{s^2}{4} = \frac{2 \cdot 4 \cdot 3 \cdot 649}{25} \text{ cm}^2 \Rightarrow s^2 = \frac{4^2}{25} \cdot 6 \cdot 649 \text{ cm}^2$$

$$s = \frac{4}{5} \cdot \sqrt{3894} \text{ cm} \approx 49,92 \text{ cm}$$

S. 47/11b, Gleichschenkliges $\triangle ABC$

mit $a = b = 37 \text{ cm}$;

$h_c = 35 \text{ cm}$; $c = ?$



$$h_c^2 + \left(\frac{c}{2}\right)^2 = a^2 \Rightarrow \frac{c^2}{4} = a^2 - h_c^2$$

$$c^2 = 4 \cdot (37^2 - 35^2) \text{ cm}^2 = 4 \cdot 144 \text{ cm}^2 \Rightarrow$$

$$c = 2 \cdot 12 \text{ cm} = 24 \text{ cm}$$

S. 47/11c, Gleichschenkliges $\triangle ABC$ mit $c = 18 \text{ cm}$; $a = b = 12 \text{ cm}$

$h_c = ?$

Bild s.o.

$$h_c^2 = a^2 - \left(\frac{c}{2}\right)^2 = (12 \text{ cm})^2 - (9 \text{ cm})^2 = (144 - 81) \text{ cm}^2 = 63 \text{ cm}^2$$

$$\Rightarrow h_c = \sqrt{63} \text{ cm} = 3 \cdot \sqrt{7} \text{ cm} \approx 7,94 \text{ cm}$$