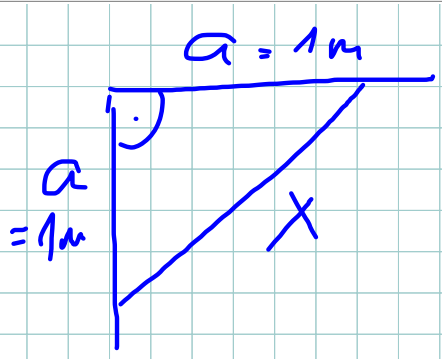
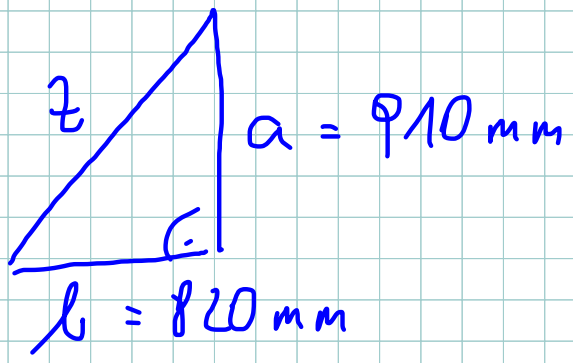
37.2



$$X = \sqrt{a^2 + a^2} = \sqrt{1^2 + 1^2} = 1,414\,m$$

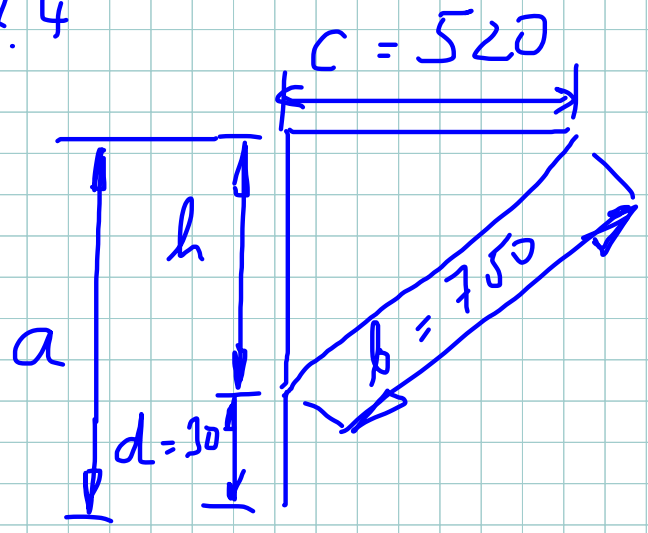
37.3



$$z = \sqrt{a^2 + b^2} = \sqrt{910^2 + 820^2} =$$

$$= 1224,85\,mm$$

37.4

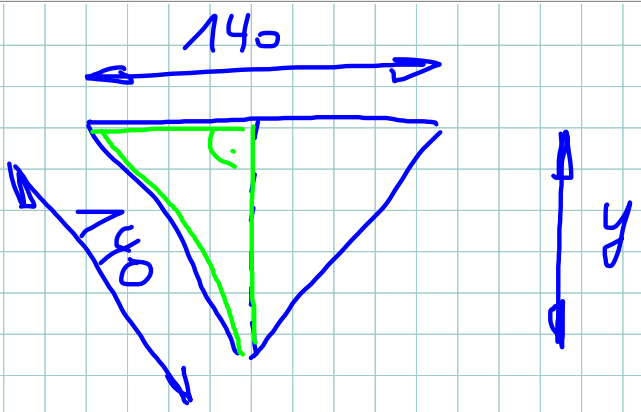


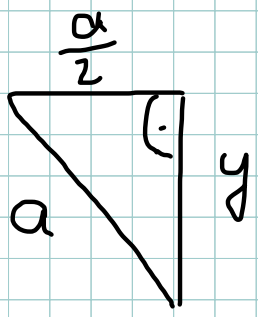
$$h = \sqrt{b^2 - c^2} = \sqrt{750^2 - 520^2} =$$

$$= 540{,}46 \text{ mm}$$

$$a = h + d = 540{,}5 + 30 = 570{,}5 \text{ mm}$$

37.5

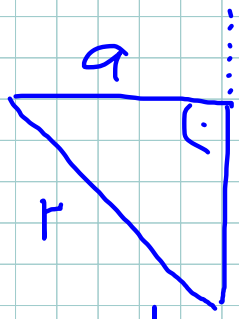




$$y = \sqrt{a^2 - \left(\frac{a}{2}\right)^2} = \sqrt{140^2 - \left(\frac{140}{2}\right)^2}$$

$$= 121{,}24 \text{ mm}$$

37.6



$a = \frac{SW}{2}$

$r = \frac{d}{2} = \frac{60}{2} = 30\,mm$

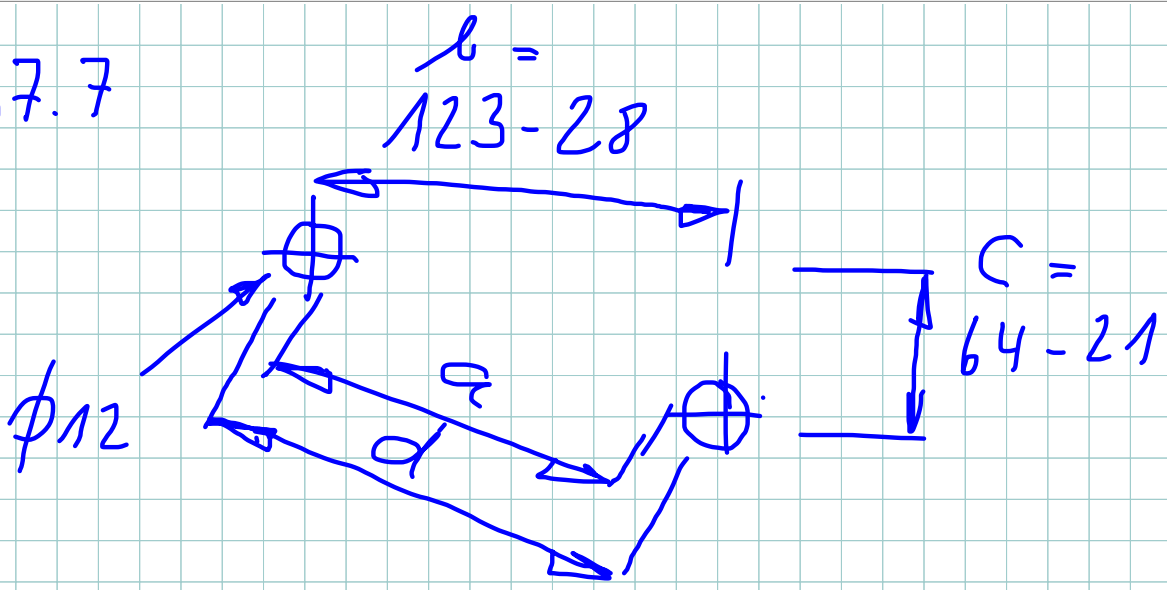
$r^2 = a^2 + a^2 = 2a^2$

$a = \sqrt{\frac{r^2}{2}} = \sqrt{\frac{30^2}{2}} = 21,4\,mm$

$SW = 2 \cdot a = 2 \cdot 21,4 = 42,43\,mm$

$h = \frac{d - SW}{2} = \frac{60 - 42,4}{2} = 8,8\,mm$

37.7



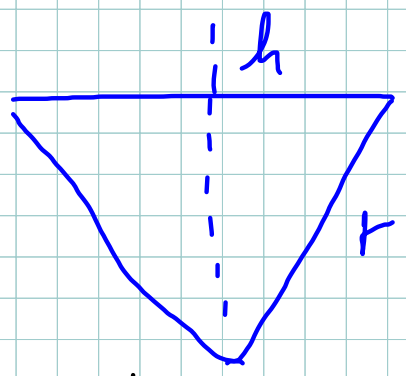
$$b = 123 - 28 = 95\ mm$$

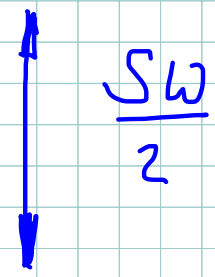
$$c = 64 - 21 = 43\ mm$$

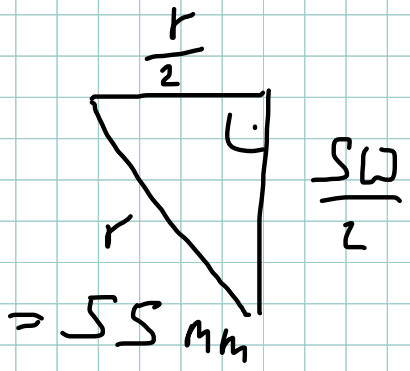
$$d = \sqrt{b^2 + c^2} = \sqrt{95^2 + 43^2} = 104\ mm$$

$$a = d - 2 \cdot \frac{\phi}{2} = 104 - 2 \cdot \frac{12}{2} = 92\ mm$$

37.8







$\Rightarrow 55\ mm$

$$\frac{SW}{2} = \sqrt{r^2 - \left(\frac{r}{2}\right)^2} = \sqrt{55^2 - \left(\frac{55}{2}\right)^2} =$$

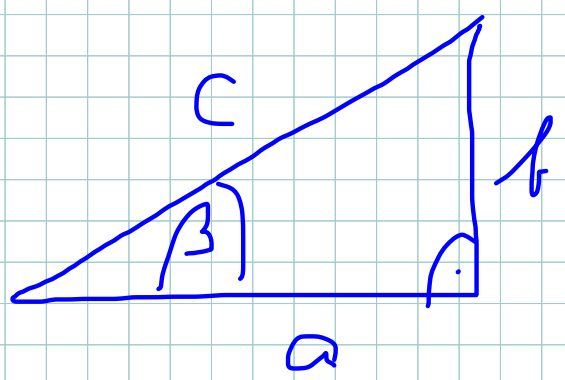
$$= 47,63\ mm$$

$$SW = 2 \cdot 47,63 = 95,26\ mm$$

$$h = \frac{d - SW}{2} = \frac{110 - 95,3}{2} =$$

$$= 7,35\ mm$$

37.13



$\beta = 30°$

$c = 120\ mm$

$$\cos\beta = \frac{a}{c} \Rightarrow a = c \cdot \cos\beta =$$

$$= 120 \cdot \cos 30 =$$

$$= 104\ mm$$

$$\sin\beta = \frac{b}{c} \Rightarrow b = c \cdot \sin\beta =$$

$$= 120 \cdot \sin 30° = 60\ mm$$

37.14 $\alpha = 49°$ $AK = 80\ mm$

$$\cos\alpha = \frac{AK}{Hyp} \Rightarrow Hyp = \frac{AK}{\cos\alpha} =$$

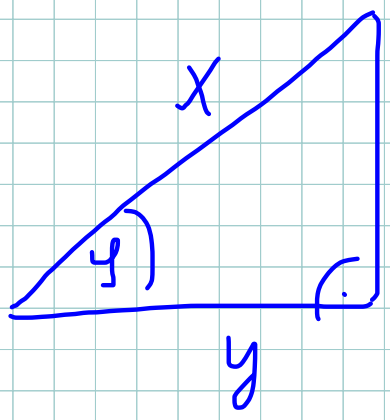
$$= \frac{80}{\cos 49} =$$

$$= 122\ mm$$

$$GK = \sqrt{Hyp^2 - AK^2} = \sqrt{122^2 - 80^2} =$$

$$= 92\ mm$$

37.15



$\varphi = 80°$

$a = 15\,cm$

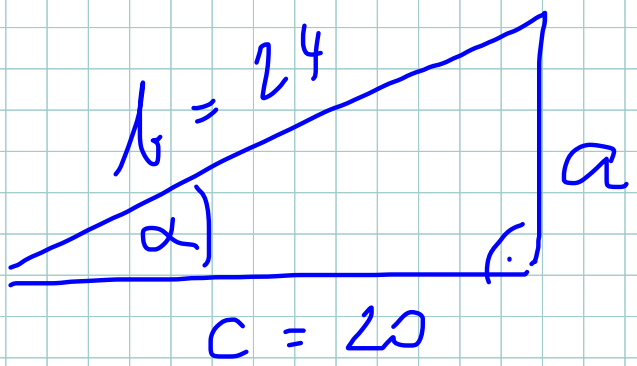
$$\sin\varphi = \frac{a}{x}$$

$$x = \frac{a}{\sin\varphi} = \frac{15}{\sin 80°} = 15{,}23\,cm$$

$$y = \sqrt{x^2 - a^2} = \sqrt{15{,}23^2 - 15^2} =$$

$$= 2{,}64\,cm$$

37.16



$$a = \sqrt{b^2 - c^2} = \sqrt{24^2 - 20^2} = 13{,}3 \text{ mm}$$

$$\cos\alpha = \frac{c}{b} = \frac{20}{24} = 0{,}8333$$

37.17 $Hy = 160$ mm $GK = 90$ mm

$$\sin\alpha = \frac{GK}{Hyp} = \frac{90}{160} = 0{,}562$$

$$AK = \sqrt{Hyp^2 - GK^2} = \sqrt{160^2 - 90^2} = 132 \text{ mm}$$

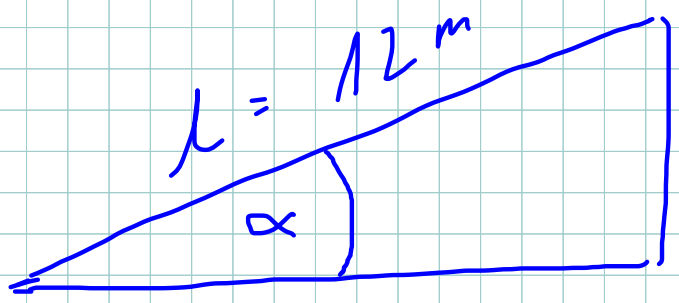
37.18 $GK = 1,7\,m$ $AK = 2,3\,m$

$$\tan\alpha = \frac{GK}{AK} = \frac{1,7}{2,3} = 0,74$$

$$Hyp = \sqrt{AK^2 + GK^2} =$$

$$= \sqrt{1,7^2 + 2,3^2} = 2,86\,m$$

37.19



$$\alpha = \arcsin \frac{h}{l} = \arcsin \frac{1,3}{12} =$$

$$= 6,22^\circ$$

$$= 6^\circ 13' 9''$$

37.20

$h = 6\,m$

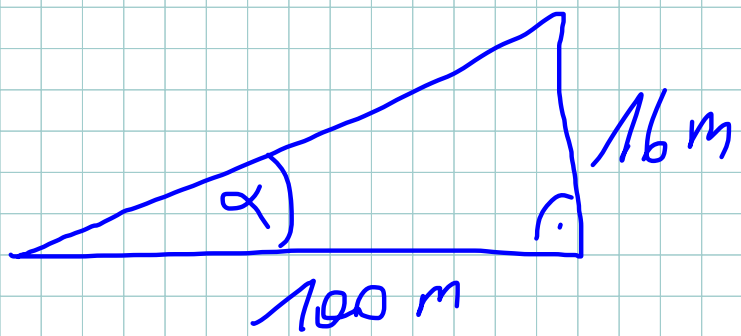
$\alpha = 60°$

$$\sin\alpha = \frac{h}{l}$$

$$l = \frac{h}{\sin\alpha} = \frac{6}{\sin 60°} = 6{,}93\,m$$

37.21

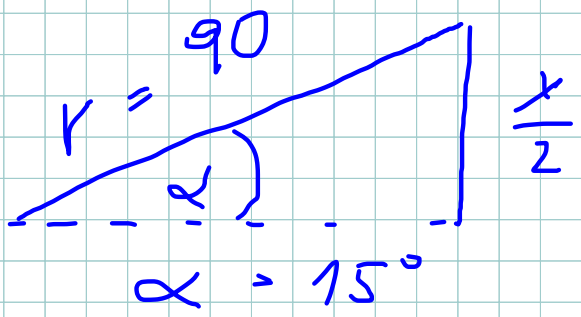
16 %



$$\alpha = \arctan \frac{GK}{AK} =$$

$$= \arctan \frac{16}{100} = 9{,}09°$$

37.22



$$\sin\alpha = \frac{\frac{x}{2}}{r}$$

$$\frac{x}{2} = r \cdot \sin\alpha$$

$$x = 2 \cdot r \cdot \sin\alpha =$$

$$= 2 \cdot 90 \cdot \sin 15 = 46{,}6\ mm$$