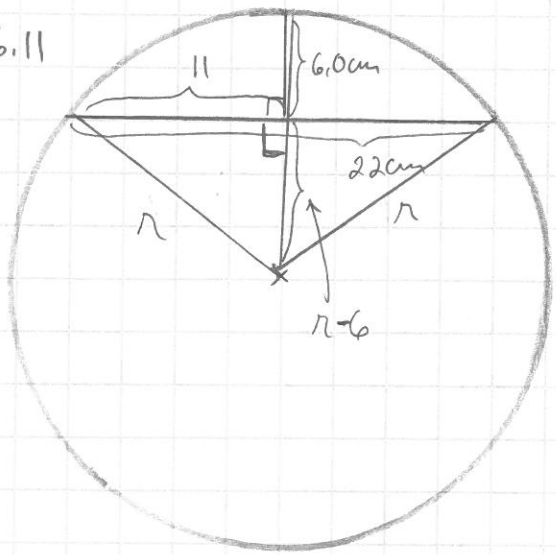
Sinilause: $\frac{y}{\sin 2{,}5^\circ} = \frac{500\,m}{\sin 1^\circ} \quad | \cdot \sin 2{,}5^\circ$

$\Leftrightarrow y = \frac{500\,m \cdot \sin 2{,}5^\circ}{\sin 1^\circ} \approx 1249{,}667\,m$

$\sin 3{,}5^\circ = \frac{h}{y} \quad \Leftrightarrow h = y \cdot \sin 3{,}5^\circ \approx 76\,(m)$

$\cos 3{,}5^\circ = \frac{x}{y} \quad \Leftrightarrow x = y \cos 3{,}5^\circ \approx 1250\,(m)$

6.11



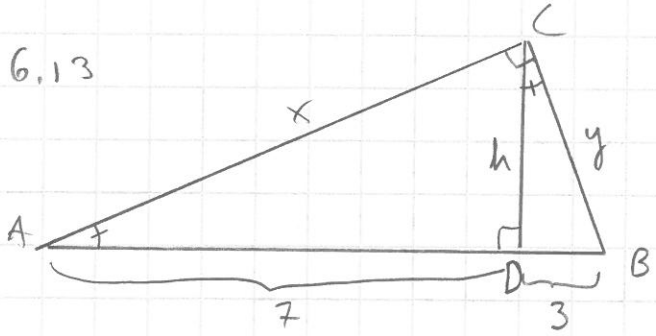
Pythagoras: $(r-6)^2 + 11^2 = r^2$

$\Leftrightarrow \cancel{r^2} - 12r + 36 + 121 = \cancel{r^2}$

$\Leftrightarrow 157 = 12r$

$\Leftrightarrow r = \frac{157}{12} \approx 13{,}083 \approx \underline{13\,(cm)}$

6.13



$\triangle ADC \sim \triangle BDC$ (kk)

1° mol. suora kulma

2° $\sphericalangle A = \sphericalangle DCB$ $\begin{cases} \text{reasemmat kyljet } \perp \\ \text{oikeat } \quad -\text{''}- \end{cases}$

$\frac{h}{7} = \frac{3}{h} \quad | \times$

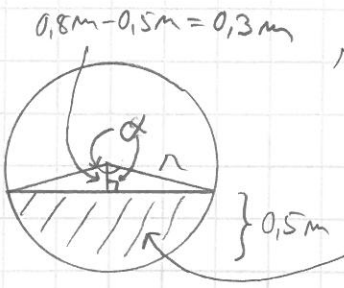
$\Leftrightarrow h^2 = 21 \quad | \sqrt{\ } \Leftrightarrow h = (\pm)\sqrt{21}$

$\Rightarrow$ pinta-ala: $A = \frac{1}{2} \cdot (7+3) \cdot \sqrt{21} = \underline{5\sqrt{21}}$

⌈TAI: Pythagoras: $\begin{cases} 7^2 + h^2 = x^2 \\ x^2 + y^2 = 10^2 \\ 3^2 + h^2 = y^2 \end{cases}$ laskimella $\Rightarrow$ $x = \sqrt{70}$, $y = \sqrt{30}$, $h = \sqrt{21}$

$\Rightarrow A = \frac{1}{2}(7+3) \cdot \sqrt{21} = 5\sqrt{21}$ ⌋

7.8



$r = \frac{1{,}6\,m}{2} = 0{,}8\,m$

$\cos\alpha = \frac{0{,}3\,m}{0{,}8\,m} \Rightarrow \alpha \approx 67{,}976^\circ$

$A_{seg} = A_s - A_k = \frac{2\alpha}{360^\circ} \cdot \pi r^2 - \frac{1}{2} \cdot r \cdot r \cdot \sin 2\alpha$

$= \frac{2 \cdot 67{,}976^\circ}{360^\circ} \cdot \pi \cdot (8\,dm)^2 - \frac{1}{2} \cdot (8\,dm)^2 \cdot \sin(2 \cdot 67{,}976^\circ)$

$\approx 53{,}6812\,dm^2$