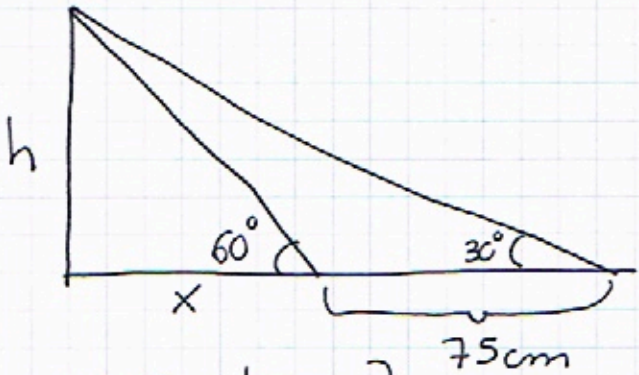


11



$$\left. \begin{aligned} \sin 30^\circ &= \frac{h}{x+75} \\ \sin 60^\circ &= \frac{h}{x} \end{aligned} \right\} \left. \begin{aligned} \frac{1}{2} &= \frac{h}{x+75} \\ \frac{\sqrt{3}}{2} &= \frac{h}{x} \end{aligned} \right\} \left. \begin{aligned} h &= \frac{x+75}{2} \\ h &= \frac{x\sqrt{3}}{2} \end{aligned} \right\}$$

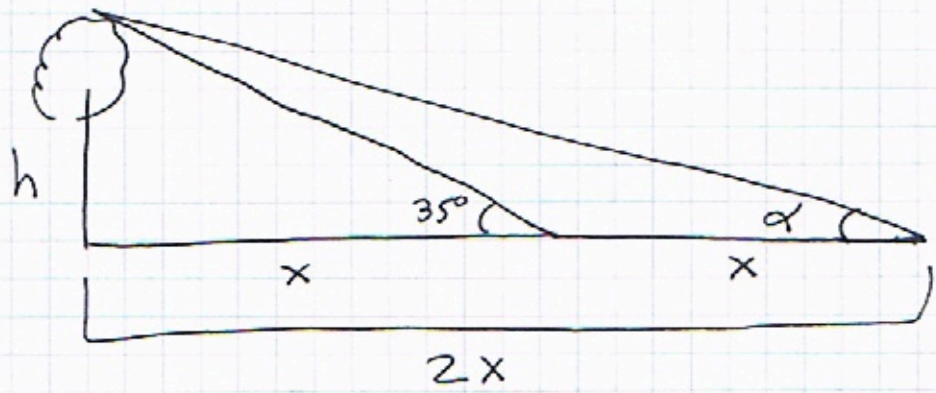
Igualem les dues expressions d'h :

$$\begin{aligned} \frac{x+75}{2} &= \frac{x\sqrt{3}}{2} \\ x - x\sqrt{3} &= -75 \\ x(1-\sqrt{3}) &= -75 \\ x &= \frac{75}{\sqrt{3}-1} \approx 102,45 \text{ cm} \end{aligned}$$

Substituim en  $h = \frac{x+75}{2} = \frac{102,45+75}{2} \approx 88,73 \text{ cm}$

L'altura de la torre és aproximadament 88,73 cm

12



$$\left. \begin{aligned} \text{tg } 35^\circ &= \frac{h}{x} \\ \text{tg } \alpha &= \frac{h}{2x} \end{aligned} \right\} \left. \begin{aligned} h &= x \text{ tg } 35^\circ \\ h &= 2x \text{ tg } \alpha \end{aligned} \right\}$$