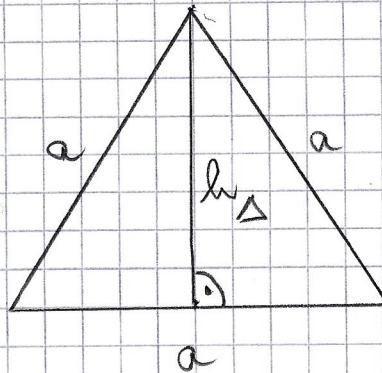


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$$a = 6 \text{ cm}$$

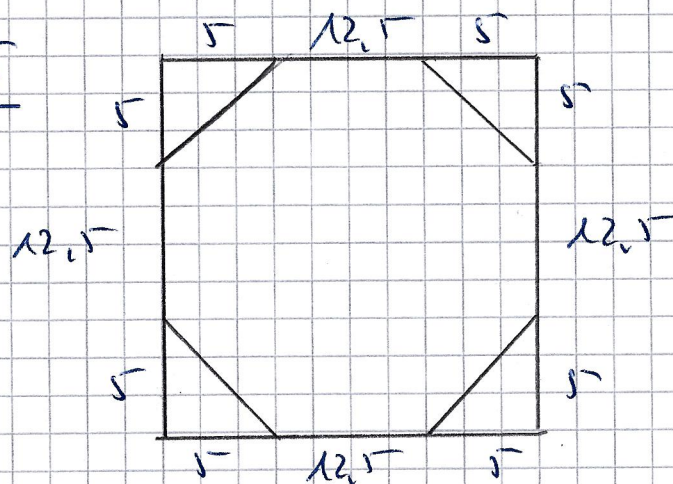
$$h_{\Delta} = \frac{a}{2} \sqrt{3}$$



(Höhe im gleichseitigen Dreieck;
Anwendung des Satzes von Pythagoras)

$$\begin{aligned} V &= G \cdot h_{\text{Prisma}} \\ &= \frac{1}{2} a \cdot h_{\Delta} \cdot h_{\text{Prisma}} \\ &= \frac{1}{2} a \cdot \frac{a}{2} \sqrt{3} \cdot 12,5 \text{ cm} \\ &= \frac{1}{4} a^2 \sqrt{3} \cdot 12,5 \text{ cm} \\ &= \frac{1}{4} \cdot 36 \text{ cm}^2 \sqrt{3} \cdot 12,5 \text{ cm} \\ &\approx 194,9 \text{ cm}^3 \end{aligned}$$

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$$\begin{aligned} G &= (12,5 \text{ cm} + 10 \text{ cm})^2 - 4 \cdot \frac{1}{2} \cdot 5 \text{ cm} \cdot 5 \text{ cm} \\ &= (22,5 \text{ cm})^2 - 50 \text{ cm} = 456,25 \text{ cm}^2 \end{aligned}$$

$$\begin{aligned} V &= G \cdot h \\ &= 456,25 \text{ cm}^2 \cdot 180 \text{ cm} \\ &= 82125 \text{ cm}^3 \end{aligned}$$

$$m = \rho \cdot V = 2,8 \frac{\text{g}}{\text{cm}^3} \cdot 82125 \text{ cm}^3$$

$$\begin{aligned} m &= 229950 \text{ g} \\ &\approx 230 \text{ kg} \end{aligned}$$