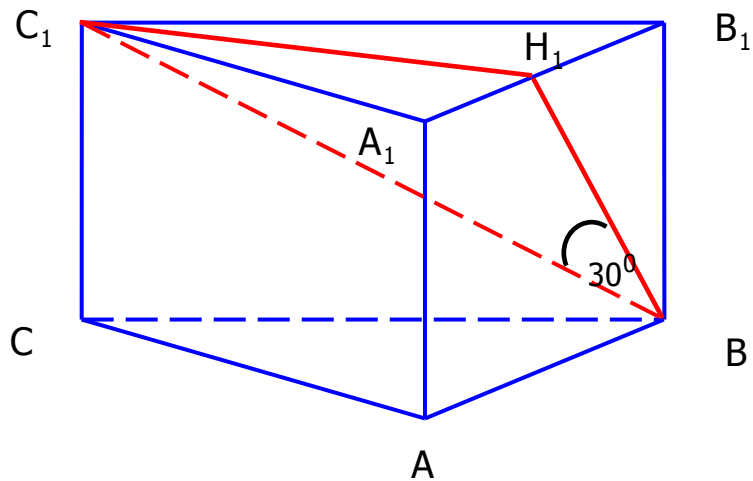




$ABCA_1B_1C_1$ – правилна триъг. призма с основен ръб = 4 см $\Rightarrow S_{\square ABC} = \frac{4^2\sqrt{3}}{4} = 4\sqrt{3} \text{ cm}^2$

$\Rightarrow V = 4\sqrt{3} \cdot h$ (h – височината на призмата = околн ръб).

$(A_1B_1C_1) \perp (ABA_1)$; $(A_1B_1C_1) \cap (ABA_1) = B_1A_1$; построяваме $C_1H_1 \perp B_1A_1$ (в рав. $(A_1B_1C_1)$)

$\Rightarrow C_1H_1 \perp (ABA_1) \Rightarrow \square C_1BH_1 = 30^\circ$; $C_1H_1 = \frac{A_1B_1\sqrt{3}}{2} = 2\sqrt{3}$.

$\square C_1BH_1 \Rightarrow \frac{BH_1}{C_1H_1} = \cot 30^\circ = \sqrt{3} \Rightarrow BH_1 = 2\sqrt{3} \cdot \sqrt{3} = 6 \text{ cm}$; $\square BB_1H_1 \Rightarrow BB_1 = h = \sqrt{36 - 4} = 4\sqrt{2}$

$\left(\text{Т на Питагор и } H_1B_1 = \frac{1}{2} AB = 2 \text{ cm.} \right) \Rightarrow V = 4\sqrt{3} \cdot 4\sqrt{2} = 16\sqrt{6} \text{ cm}^3$.