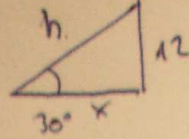
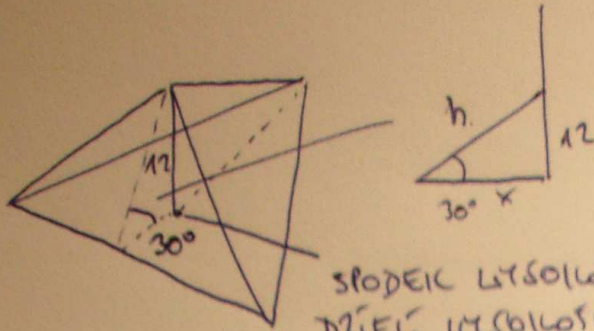


2AD



$$\tan 30^\circ = \frac{12}{x}$$

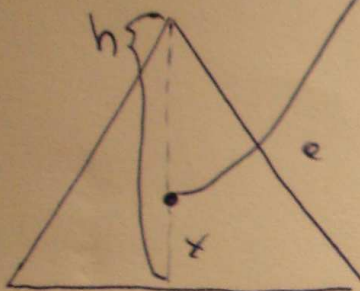
$$x = \frac{12}{\tan 30^\circ} = \frac{12}{\frac{1}{\sqrt{3}}} = 12\sqrt{3}$$

SPÓDEK WYSOKOŚĆ  
DZIEŁ WYSOKOŚĆ =  
PODSTAWE I  
PROPORCJA 2:1

$$\frac{12}{\frac{12}{\sqrt{3}}} = \frac{12 \cdot \sqrt{3}}{\sqrt{3}} = \frac{12\sqrt{3}}{1} = 12\sqrt{3}$$

$$\sin 30^\circ = \frac{12}{h}$$

$$h = \frac{12}{\sin 30^\circ} = \frac{12}{\frac{1}{2}} = 24$$



2 TL. PITAGORASA

$$e^2 - \frac{e^2}{4} = h^2$$

$$\frac{4e^2 - e^2}{4} = (36\sqrt{3})^2$$

$$\frac{3e^2}{4} = 3888 \quad : \frac{3}{4}$$

$$h = 3x = 3 \cdot 12\sqrt{3} = 36\sqrt{3} \quad e^2 = \frac{1296}{\frac{3}{4}} = \frac{1296 \cdot 4}{3}$$

$$e^2 = 5184$$

$$e = 72$$

$$P_{\text{podst}} = \frac{e^2 \sqrt{3}}{4} \quad (\text{ZNAJĘC IZNÓR})$$

$$P_{\text{bok}} = \frac{1}{2} e \cdot h = \frac{1}{2} \cdot 72 \cdot 24 = 864$$

$$P_{\text{podst}} = \frac{72^2 \sqrt{3}}{4} = \frac{5184 \sqrt{3}}{4} = 1296\sqrt{3}$$

$$P_{\text{całk}} = P_{\text{podst}} + 3P_{\text{bok}}$$

$$= 1296\sqrt{3} + 3 \cdot 864 =$$

$$= 1296\sqrt{3} + 2592 =$$

$$= 1296(\sqrt{3} + 2)$$

$$V = \frac{1}{3} P_{\text{podst}} \cdot h = \frac{1}{3} \cdot 1296\sqrt{3} \cdot 24 =$$

$$= 5184\sqrt{3}$$

SPRAWDNIŁEM GEOMETRYCZNIE :)