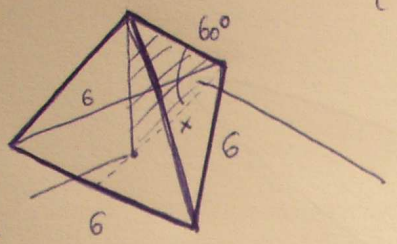
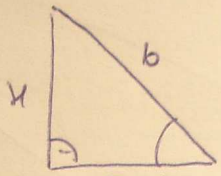
ZAD 3

V ; $P_{CAŁK} = ?$



SPODEK WYSOKOŚCI DZIELI WYSOKOŚĆ PODSTAWY W PROPORCJI 2:1



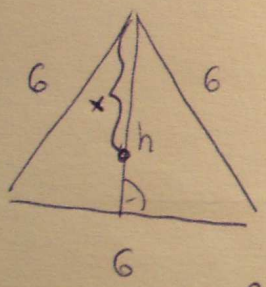
$\cos 60° = \frac{2\sqrt{3}}{b}$

$\frac{1}{2} = \frac{2\sqrt{3}}{b} \Rightarrow b = 4\sqrt{3}$

$\sin 60° = \frac{H}{b}$

$H = b \cdot \sin 60° = \cancel{4}\sqrt{3} \cdot \frac{\sqrt{3}}{\cancel{2}} = 6$

PODSTAWA



1 TW. PITAGORASA

$h^2 = 6^2 - 3^2$

$h^2 = 36 - 9$

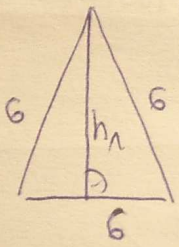
$h = \sqrt{27}$

$h = 3\sqrt{3}$

$x = \frac{2}{3}h = \frac{2 \cdot 3\sqrt{3}}{\cancel{3}} = 2\sqrt{3}$

$P_{podst} = \frac{6^2\sqrt{3}}{4} = \frac{36\sqrt{3}}{4} = 9\sqrt{3}$

TRÓJKĄT BOCZNY



TRÓJKĄT RÓWNOBOCZNY

$P_{\Delta boku} = \frac{6^2\sqrt{3}}{4} = \frac{36\sqrt{3}}{4} = 9\sqrt{3}$

$V = \frac{1}{3} P_{podst} \cdot H = \frac{1}{\cancel{3}_1} \overset{3}{9}\sqrt{3} \cdot 6 =$

$= 18\sqrt{3}$

$P_{CAŁK} = P_{podst} + 3P_{\Delta boku} =$

$= 9\sqrt{3} + 3 \cdot 9\sqrt{3} = 9\sqrt{3} + 27\sqrt{3} =$

$= 36\sqrt{3}$