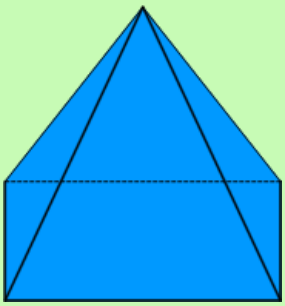
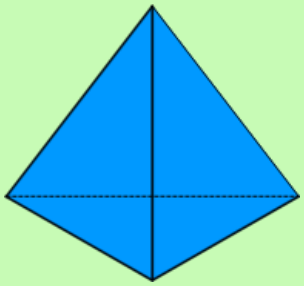
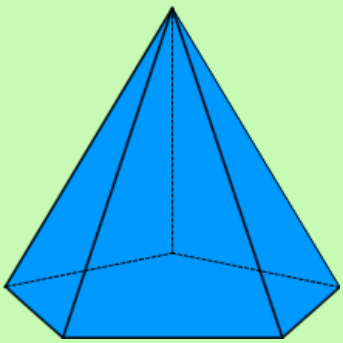
Jehlan

čtyřboký jehlan



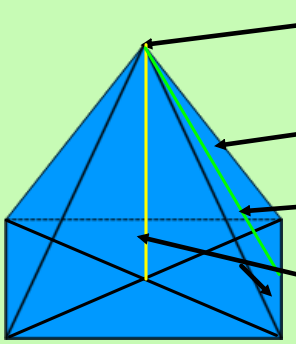


trojboký jehlan - čtyřstěn



pětiboký jehlan

dub 16-21:29



objem: $V = \frac{1}{3} \cdot S_p \cdot v$

$V = \frac{1}{3} \cdot a \cdot b \cdot v$

$V = \frac{1}{3} \cdot a \cdot a \cdot v$

$S = Sp + S_{pl}$

$S = a^2 + 2 \cdot a \cdot w$

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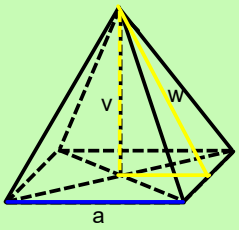
Vypočítej objem a povrch pravidelného čtyřbokého jehlanu, je-li a = 4 cm a v = 6 cm.



$V = \frac{1}{3} . a^2 . v$

$V = \frac{1}{3} . 4^2 . 6$

$V = \frac{1}{3} . 16 . 6$

$V = 32\ cm^3$

$\frac{1}{3}$

$S = a^2 + 2aw$

$S = 4^2 + 2.4. 6{,}32$

$S = 16 + 50{,}56$

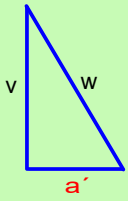
$\underline{S = 66{,}56\ cm^2}$

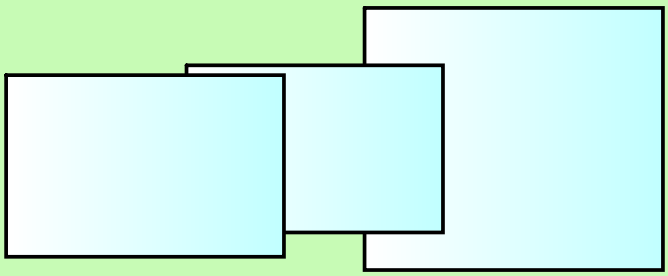
$w^2 = a'^2 + v^2$

$w^2 = 2^2 + 6^2$

$w^2 = 40$

$\underline{w = 6{,}32\ cm}$





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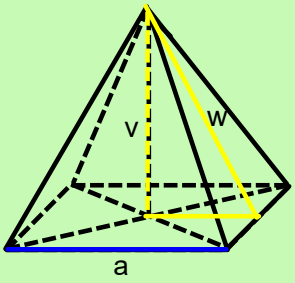
Vypočítej výšku čtyřbokého jehlanu, když jeho podstava je obdélník s rozměry 8 cm a 5 cm a jeho objem je 120 cm^3.



$V = \frac{1}{3} . a . b . v$

$120 = \frac{1}{3} . 8 . 5 . v$

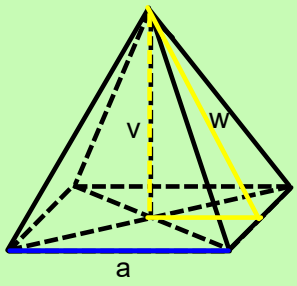
$120 = \frac{1}{3} . 40 . v$

$\underline{v = 9\ cm}$

$\frac{1}{3}$

dub 16-21:29

Vypočítej délku podstavné hrany pravidelného čtyřbokého jehlanu o výšce 10 cm, je-li jeho objem $V = 270\ cm^3$.



$V = \frac{1}{3} \cdot a^2 \cdot v$

$270 = \frac{1}{3} \cdot a^2 \cdot 10$

$a^2 = 81$

$a = 9\ cm$

$\frac{1}{3}$

dub 16-21:29