

GEOMETRIE *tahák*

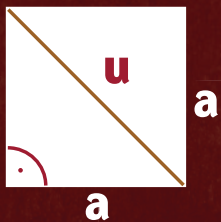
obrazce

o = obvod r = poloměr
 S = obsah d = průměr
 u = úhlopříčka

čtverec

$$o = 4a$$

$$S = a^2$$



obdélník

$$o = 2(a + b)$$

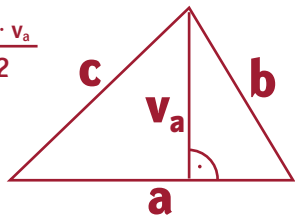
$$S = ab$$



trojúhelník

$$o = a + b + c$$

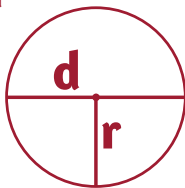
$$S = \frac{a \cdot v_a}{2}$$



kruh

$$o = 2\pi r = \pi d$$

$$S = \pi r^2$$



součet vnitřních úhlů v trojúhelníku

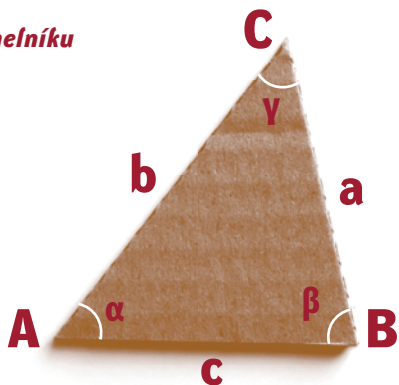
$$\alpha + \beta + \gamma = 180^\circ$$

Sinová věta

$$\frac{a}{\sin \alpha} = \frac{b}{\sin \beta} = \frac{c}{\sin \gamma}$$

Kosinová věta

$$a^2 = b^2 + c^2 - 2bc \cos \alpha$$



tělesa

V = objem
 S = povrch

S_p = obsah podstavy
 S_{pl} = obsah pláště
 v = výška tělesa
 s = strana pláště

HRANOL

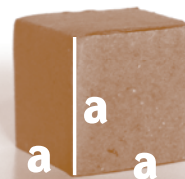
$$V = S_p \cdot v$$

$$S = 2S_p + S_{pl}$$

krychle

$$V = a^3$$

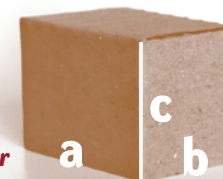
$$S = 6a^2$$



kvádr

$$V = abc$$

$$S = 2(ab + bc + ac)$$



válec

$$V = \pi r^2 v$$

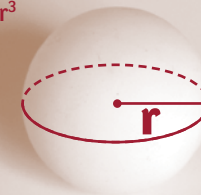
$$S = 2\pi r(r + v)$$



koule

$$V = \frac{4}{3} \pi r^3$$

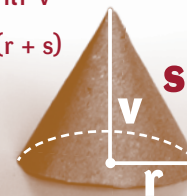
$$S = 4\pi r^2$$



kužel

$$V = \frac{1}{3} \pi r^2 v$$

$$S = \pi r(r + s)$$



jehlan

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

$$S = S_p + S_{pl}$$

