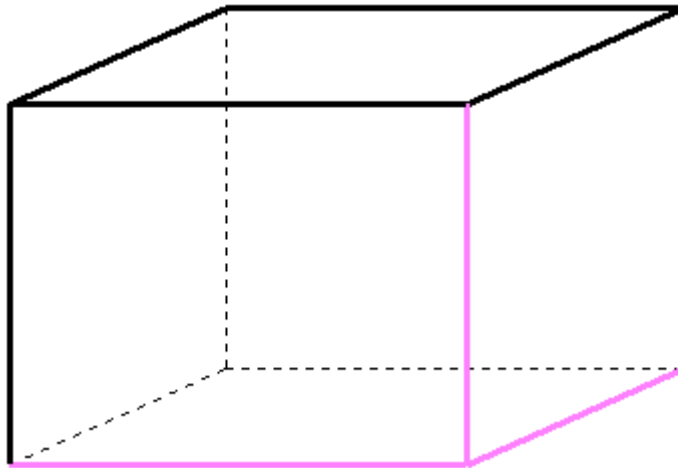


Stereometrie – tělesa

Krychle



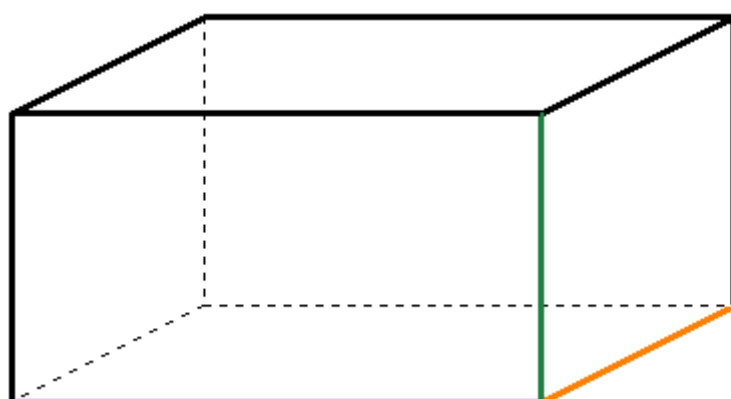
Strana a
(U krychle
jsou všechny
strany stejné)

$$V \text{ -objem} = a^3$$

$$S \text{ -povrch} = 6 * (a * a)$$

$$o \text{ -obvod podstavy} = 4 * a$$

Kvádr



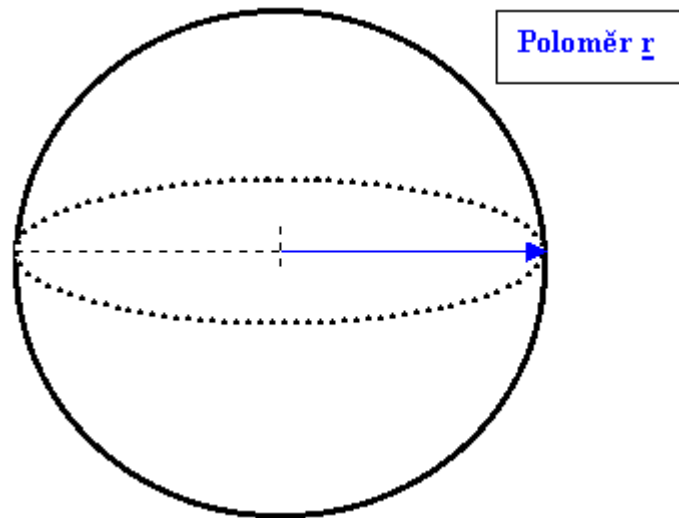
Strana a
Strana b
Strana c

$$V \text{ -objem} = a * b * c$$

$$S \text{ -povrch} = 2 * (a * b) + 2 * (b * c) + 2 * (a * c)$$

$$o \text{ -obvod podstavy} = 2 * (a + b)$$

Koule

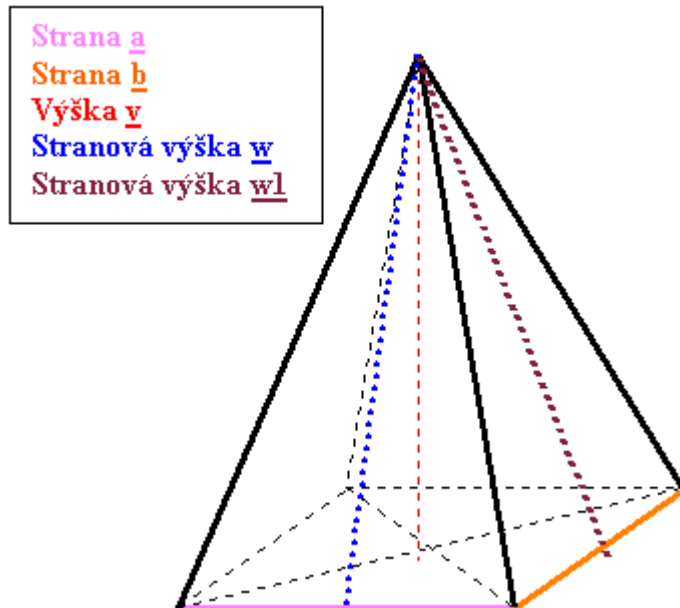


$$V \text{ -objem} = \frac{4}{3} \pi * r^3$$

$$S \text{ -povrch} = 4 \pi * r^2$$

$$o \text{ -obvod podstavy} = 2 \pi * r$$

Jehlan



$$V \text{ -objem} = \frac{1}{3}(a*b)*v = \frac{1}{3}S \text{ podstavy} * v$$

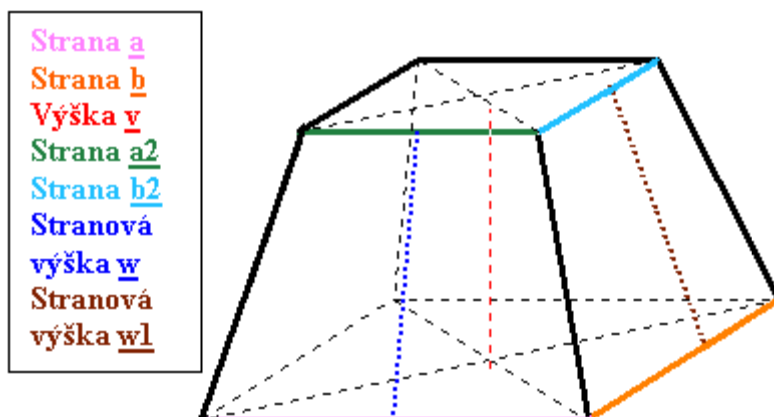
$$S \text{ -povrch} = 2*\left(\frac{a*w}{2}\right) + 2*\left(\frac{b*wl}{2}\right) + a*b = S \text{ pláště} + S \text{ podstavy}$$

$$S \text{ -strana } a = \frac{a*w}{2}$$

$$S \text{ -strana } b = \frac{b*wl}{2}$$

$$o \text{ -obvod podstavy} = 2*(a+b)$$

Komolý jehlan



$$V \text{ -objem} = \frac{v}{3} * (a * b + \sqrt{(a * b) * (a2 * b2)} + a2 * b2)$$

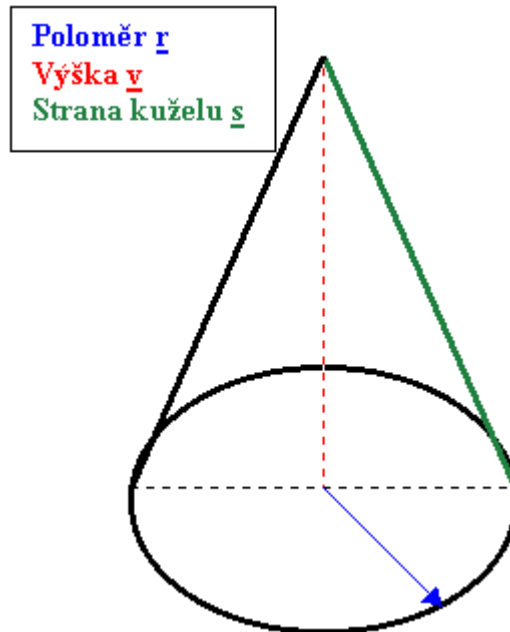
$$S \text{ -povrch} = 2 * \left(\frac{(a + a2)}{2} * w \right) + 2 * \left(\frac{(b + b2)}{2} * w1 \right) + a * b + a2 * b2$$

$$S \text{ -strana a} = \left(\frac{(a + a2)}{2} * w \right)$$

$$S \text{ -strana b} = \left(\frac{(b + b2)}{2} * w1 \right)$$

$$o \text{ -obvod podstavy} = 2 * (a + b) \text{ -(spodní); } 2 * (a2 + b2) \text{ -(vrchní)}$$

Kužel

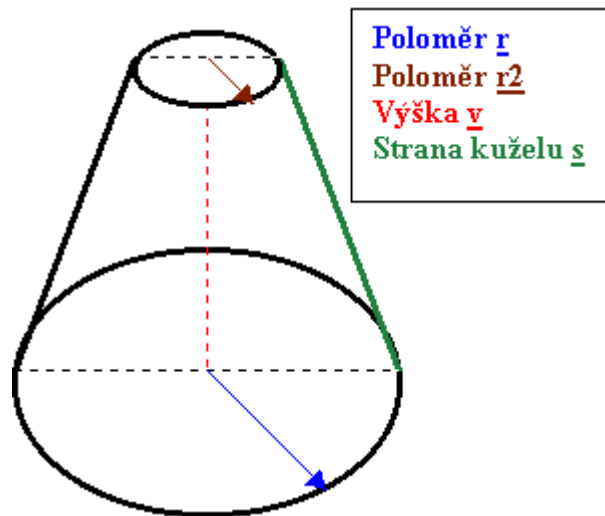


$$V - \text{objem} = \frac{1}{3} \pi * r^2 * v = \frac{1}{3} S \text{ podstavy} * v$$

$$S - \text{povrch} = \pi * r * (r + s)$$

$$o - \text{obvod podstavy} = 2 \pi * r$$

Komolý kužel



Poloměr r
Poloměr r_2
Výška v
Strana kuželu s

$$V \text{ -objem} = \frac{1}{3} \pi * v * (r^2 + r * r_2 + r_2^2)$$

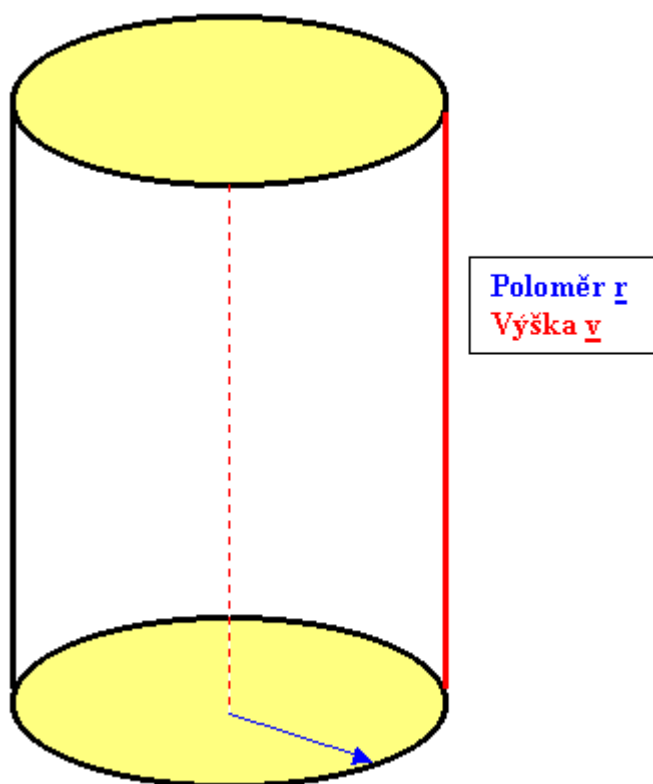
$$S \text{ -povrch} = \pi * s * (r + r_2) + \pi * r^2 + \pi * r_2^2$$

$$S \text{ -pláště} = \pi * s * (r + r_2)$$

$$S \text{ -podstav} = \pi * r^2 \text{ -dolní; } \pi * r_2^2 \text{ -horní}$$

$$o \text{ -obvod podstavy} = 2 \pi * r \text{ -(spodní); } 2 \pi * r_2 \text{ -(vrchní)}$$

Válec



$$V \text{ -objem} = \pi * r^2 * v$$

$$S \text{ -povrch} = 2 * (\pi * r^2) + 2 \pi * r * v = 2 * S \text{ podstavy} + S \text{ pláště}$$

$$S \text{ -pláště} = 2 \pi * r * v$$

$$S \text{ -jedna podstava} = \pi * r^2$$

$$o \text{ -obvod podstavy} = 2 \pi * r$$