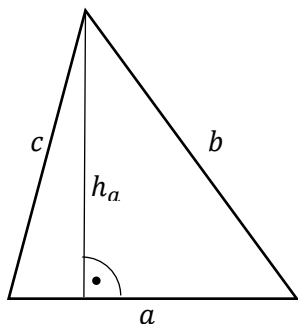


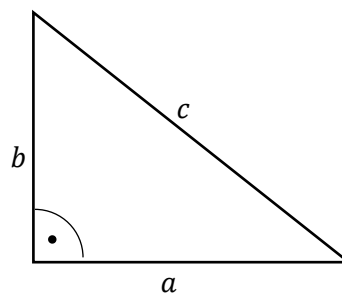
## Разностранни троугао



$$O = a + b + c$$

$$P = \frac{a \cdot h_a}{2} = \frac{b \cdot h_b}{2} = \frac{c \cdot h_c}{2}$$

## Правоугли троугао



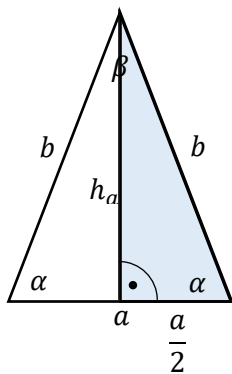
$$O = a + b + c$$

$$P = \frac{a \cdot b}{2} = \frac{c \cdot h_c}{2}$$

$$c^2 = a^2 + b^2$$

$$r_o = \frac{c}{2}$$

## Једнакокрани троугао

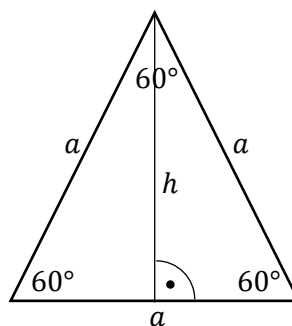


$$O = a + 2b$$

$$P = \frac{a \cdot h_a}{2} = \frac{b \cdot h_b}{2}$$

$$b^2 = \left(\frac{a}{2}\right)^2 + h_a^2$$

## Једнакостранични троугао



$$O = 3a$$

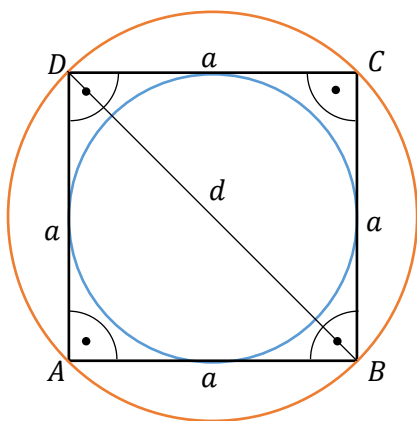
$$P = \frac{a^2\sqrt{3}}{4}$$

$$h = \frac{a\sqrt{3}}{2}$$

$$r_u = \frac{1}{3}h = \frac{1}{3} \cdot \frac{a\sqrt{3}}{2} = \frac{a\sqrt{3}}{6}$$

$$r_o = \frac{2}{3}h = \frac{2}{3} \cdot \frac{a\sqrt{3}}{2} = \frac{a\sqrt{3}}{3}$$

## Квадрат



$$O = 4a$$

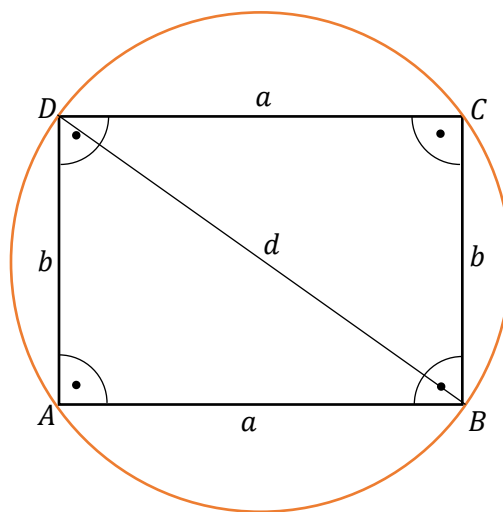
$$P = a^2$$

$$d = a\sqrt{2}$$

$$r_u = \frac{a}{2}$$

$$r_o = \frac{d}{2}$$

## Правоугаоник



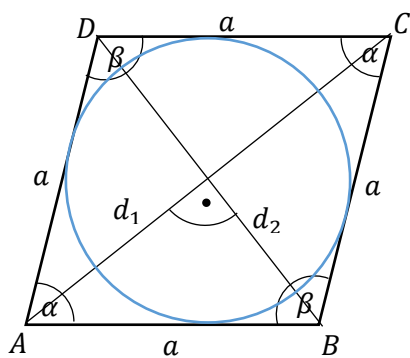
$$O = 2a + 2b$$

$$P = a \cdot b$$

$$d^2 = a^2 + b^2$$

$$r_o = \frac{d}{2}$$

## Ромб



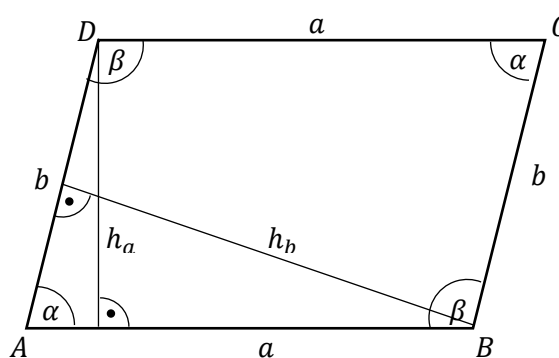
$$O = 4a$$

$$P = \frac{d_1 \cdot d_2}{2} = a \cdot h$$

$$a^2 = \left(\frac{d_1}{2}\right)^2 + \left(\frac{d_2}{2}\right)^2$$

$$r_u = \frac{h}{2}$$

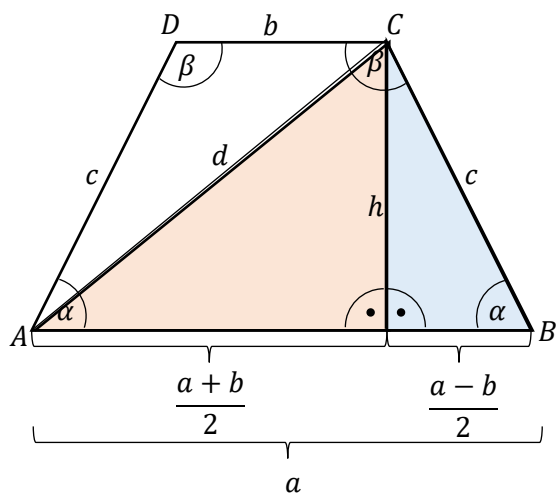
## Паралелограм



$$O = 2a + 2b$$

$$P = a \cdot h_a = b \cdot h_b$$

## Једнакократи трапез



$$O = a + b + 2c$$

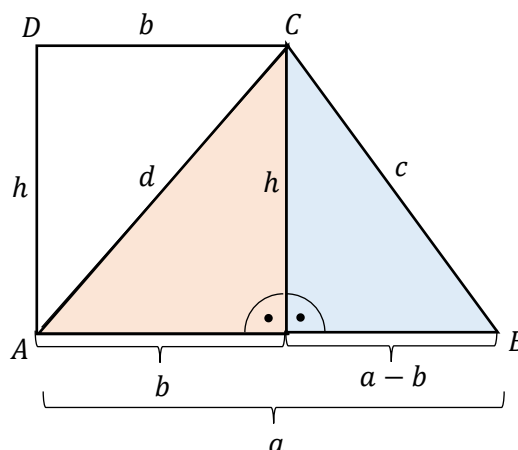
$$P = \frac{a+b}{2} \cdot h$$

$$m = \frac{a+b}{2}$$

$$d^2 = h^2 + \left(\frac{a+b}{2}\right)^2$$

$$c^2 = h^2 + \left(\frac{a-b}{2}\right)^2$$

## Правоугли трапез



$$O = a + b + c + h$$

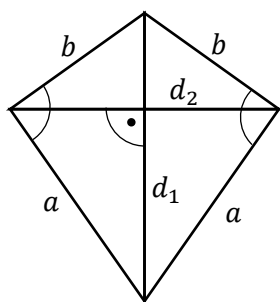
$$P = \frac{a+b}{2} \cdot h$$

$$m = \frac{a+b}{2}$$

$$d^2 = h^2 + b^2$$

$$c^2 = h^2 + (a-b)^2$$

## Делтоид



$$O = 2a + 2b$$

$$P = \frac{d_1 \cdot d_2}{2}$$

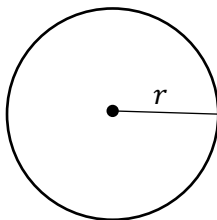
**Круг**

Површина круга:

$$P = r^2 \pi$$

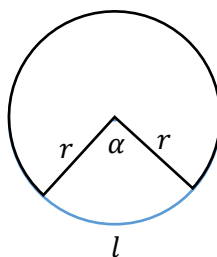
Обим круга:

$$O = 2r\pi$$



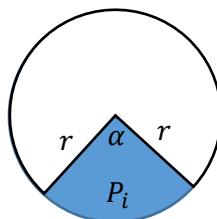
Дужина кружног лука:

$$l = \frac{2r\pi \cdot \alpha}{360^\circ}$$



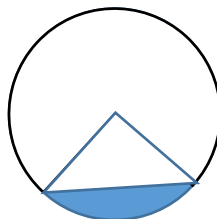
Површина кружног исечка:

$$P_i = \frac{r^2 \pi \cdot \alpha}{360^\circ}$$



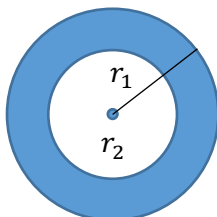
Површина кружног одсечка:

$$P_o = P_i - P_\Delta$$

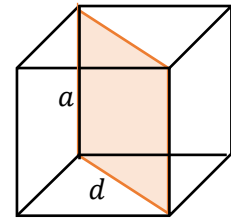
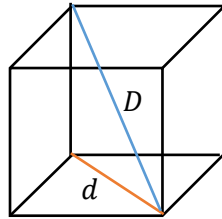
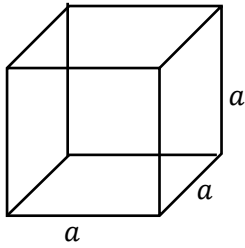


Површина кружног прстена:

$$P_p = r_1^2 \pi - r_2^2 \pi$$



## Коцка



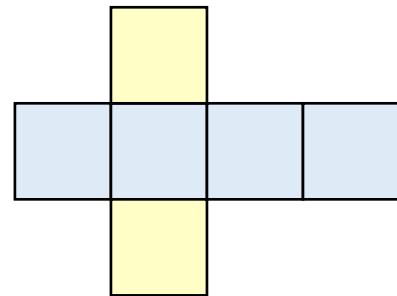
$$P = 6a^2$$

$$V = a^3$$

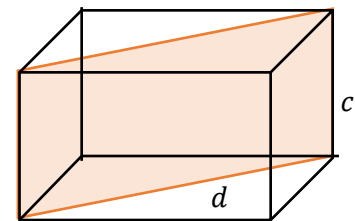
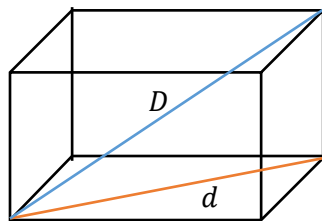
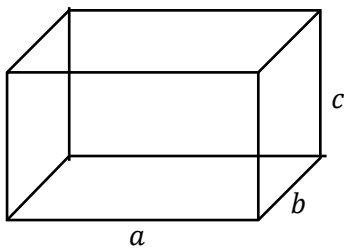
$$d = a\sqrt{2}$$

$$D = a\sqrt{3}$$

$$P_{dp} = a^2\sqrt{2}$$



## Квадар



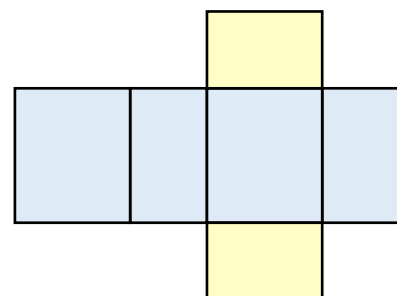
$$P = 2ab + 2ac + 2bc$$

$$V = abc$$

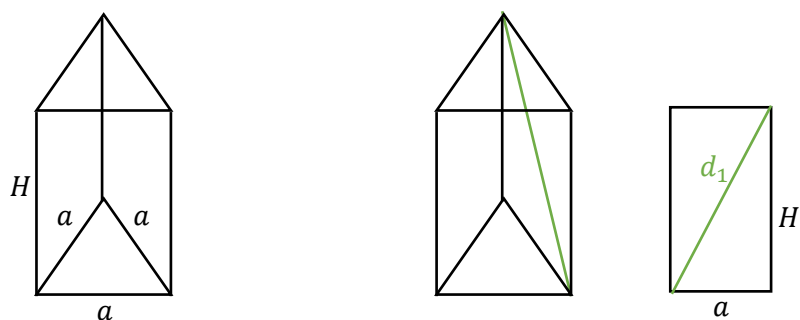
$$d^2 = a^2 + b^2$$

$$D^2 = a^2 + b^2 + c^2$$

$$P_{dp} = dc$$



### Правилна тространа призма



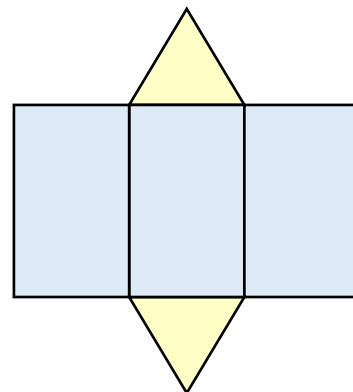
$$B = \frac{a^2\sqrt{3}}{4}$$

$$M = 3aH$$

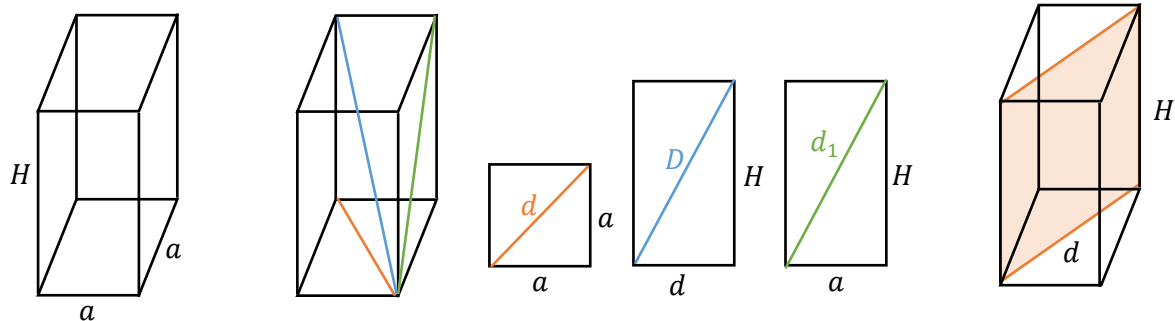
$$P = 2B + M$$

$$V = BH$$

$$d_1^2 = a^2 + H^2$$



### Правилна четворострана пирамида



$$B = a^2$$

$$M = 4aH$$

$$P = 2B + M$$

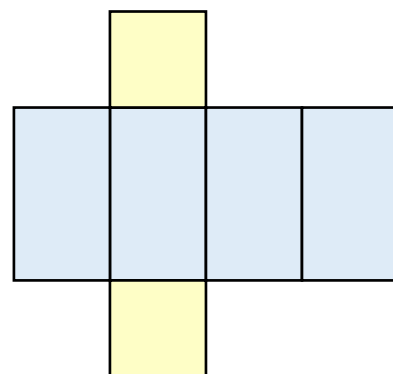
$$V = BH$$

$$d = a\sqrt{2}$$

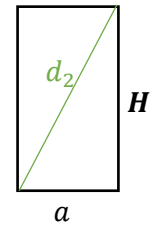
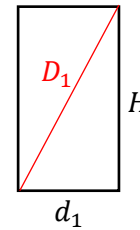
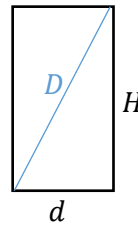
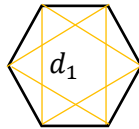
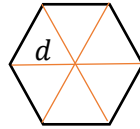
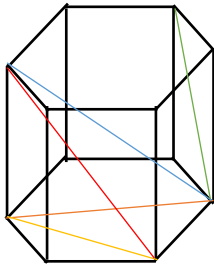
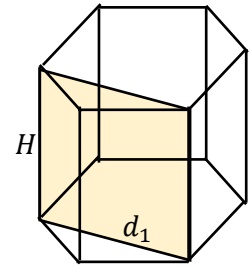
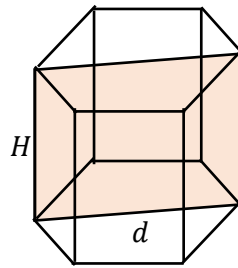
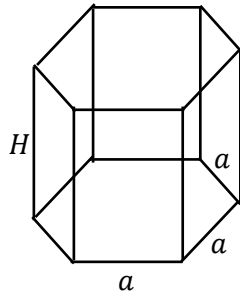
$$D^2 = d^2 + H^2$$

$$d_1^2 = a^2 + H^2$$

$$P_{ap} = dH$$



## Правилна шестострана призма



$$B = 6 \cdot \frac{a^2 \sqrt{3}}{4}$$

$$M = 6aH$$

$$P = 2B + M$$

$$V = BH$$

$$d = 2a$$

$$d_1 = a\sqrt{3}$$

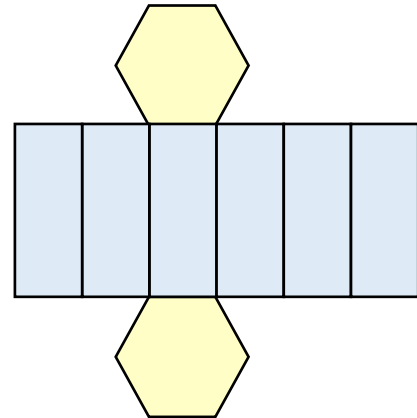
$$D^2 = d^2 + H^2$$

$$D_1^2 = d_1^2 + H^2$$

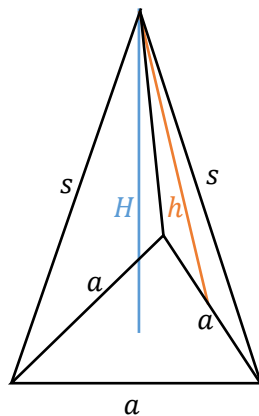
$$d_2^2 = a^2 + H^2$$

$$P_{bs} = dH$$

$$P_{bs_1} = d_1H$$

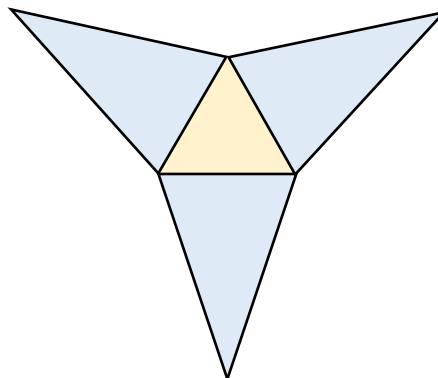


## Права правилна тространа пирамида



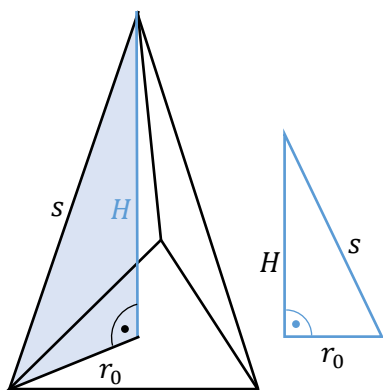
$$B = \frac{a^2\sqrt{3}}{4}$$

$$M = 3 \cdot \frac{ah}{2}$$



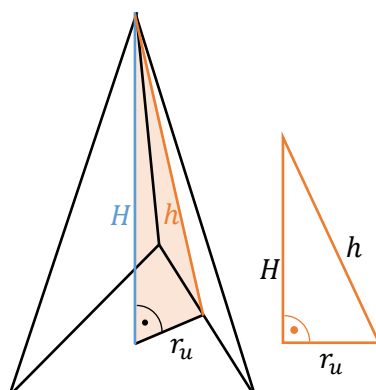
$$P = B + M$$

$$V = \frac{1}{3} \cdot BH$$



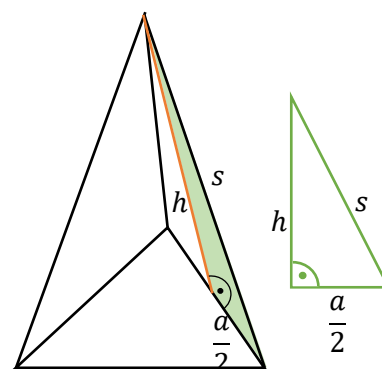
$$s^2 = H^2 + r_0^2$$

$$r_0 = \frac{a\sqrt{3}}{3}$$



$$h^2 = H^2 + r_u^2$$

$$r_u = \frac{a\sqrt{3}}{6}$$



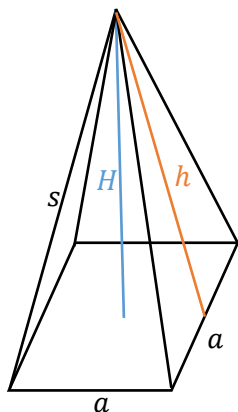
$$s^2 = h^2 + \left(\frac{a}{2}\right)^2$$

Једнакоивична права правилна тространа пирамида има три једнакостранична троугла у омотачу тј.

$$M = 3 \cdot \frac{a^2\sqrt{3}}{4}$$

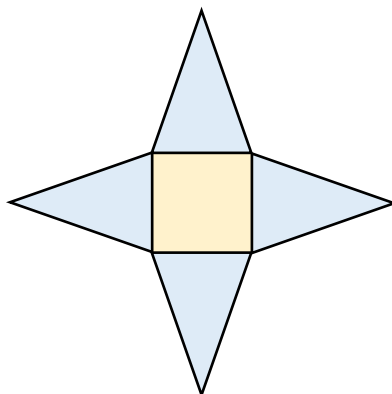


## Права правилна четворострана пирамида



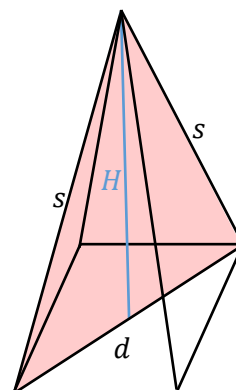
$$B = a^2$$

$$M = 4 \cdot \frac{ah}{2}$$



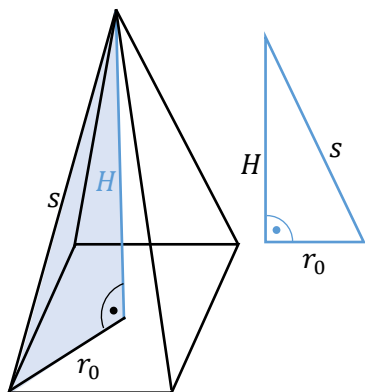
$$P = B + M$$

$$V = \frac{1}{3} \cdot BH$$



$$P_{dp} = \frac{dH}{2}$$

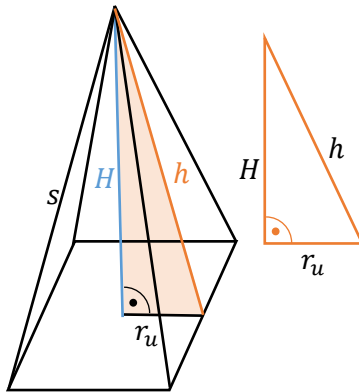
$$d = a\sqrt{2}$$



$$s^2 = H^2 + r_0^2$$

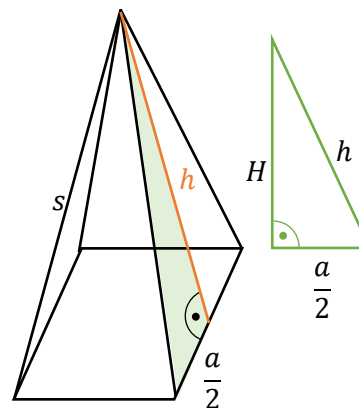
$$r_0 = \frac{d}{2}$$

$$d = a\sqrt{2}$$



$$h^2 = H^2 + r_u^2$$

$$r_u = \frac{a}{2}$$

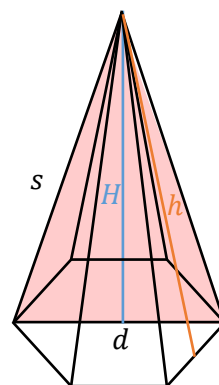
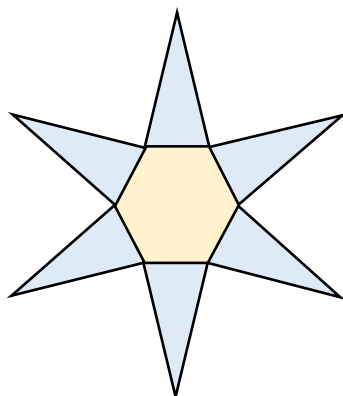
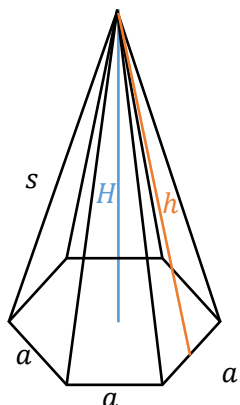


$$s^2 = h^2 + \left(\frac{a}{2}\right)^2$$

Једнакоивична права правилна четворострана пирамида има четири једнакостранична троугла у омотачу тј.

$$M = 4 \cdot \frac{a^2\sqrt{3}}{4}$$

Правна правилна шестострана пирамида



$$B = 6 \cdot \frac{a^2 \sqrt{3}}{4}$$

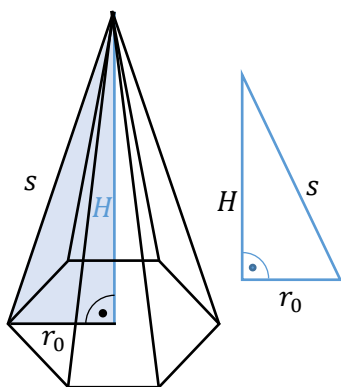
$$M = 6 \cdot \frac{ah}{2}$$

$$P = B + M$$

$$V = \frac{1}{3} \cdot BH$$

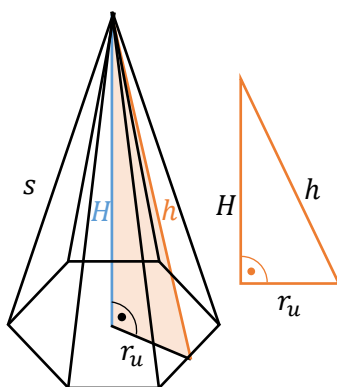
$$P_{dp} = \frac{dH}{2}$$

$$d = 2a$$



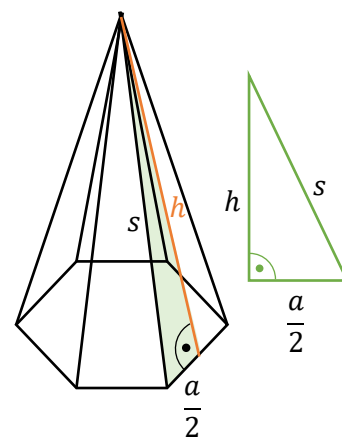
$$s^2 = H^2 + r_0^2$$

$$r_0 = a$$



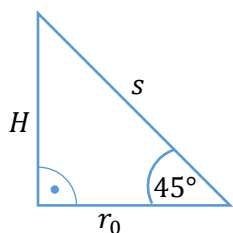
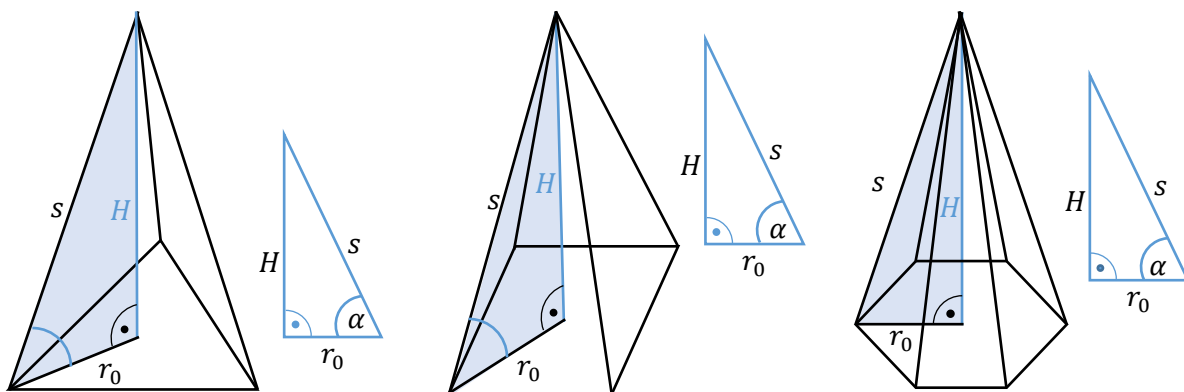
$$h^2 = H^2 + r_u^2$$

$$r_u = \frac{a\sqrt{3}}{2}$$

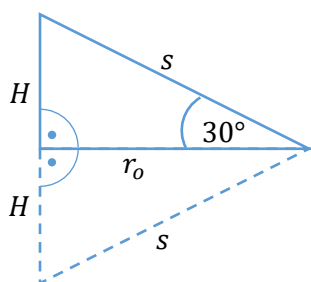


$$s^2 = h^2 + \left(\frac{a}{2}\right)^2$$

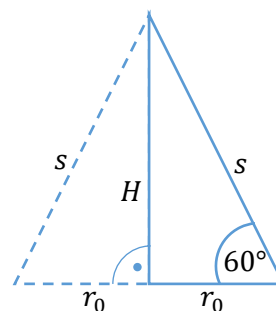
Угао између бочне ивице и равни основе  $\sphericalangle(s, r_0) = \alpha, \alpha \in \{30^\circ, 45^\circ, 60^\circ\}$ .



$$H = r_0$$

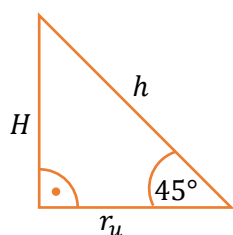
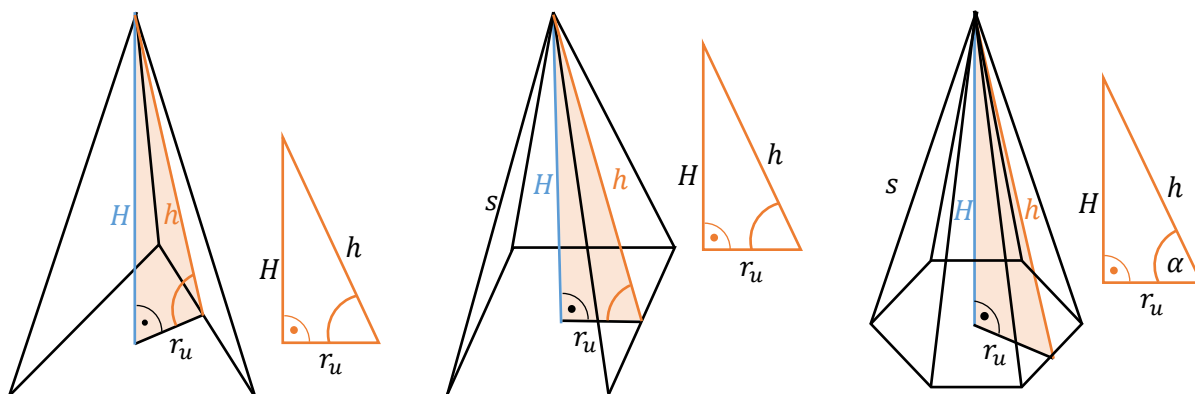


$$s = 2H$$

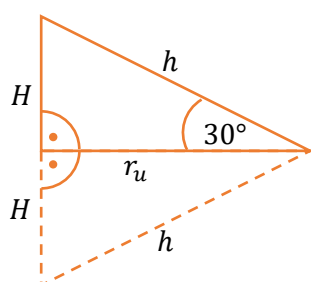


$$s = 2r_0$$

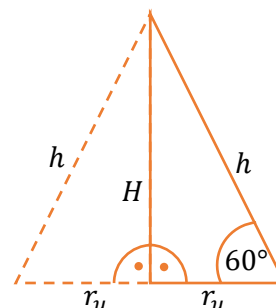
Угао између бочне стране и равни основе  $\sphericalangle(h, r_u) = \alpha, \alpha \in \{30^\circ, 45^\circ, 60^\circ\}$ .



$$H = r_u$$



$$h = 2H$$



$$h = 2r_u$$

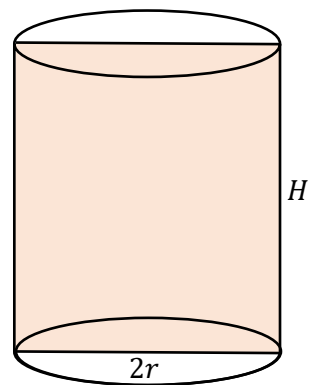
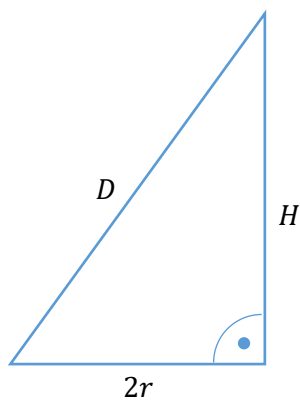
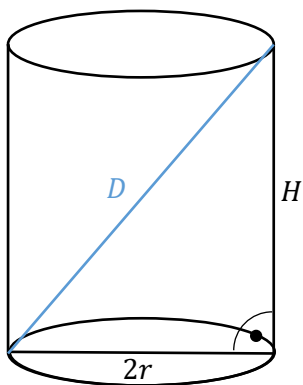
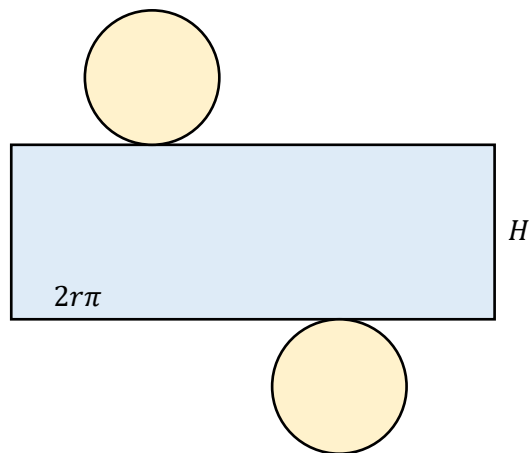
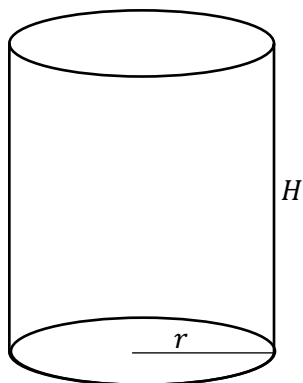
Ваљак

$$B = r^2\pi$$

$$M = 2r\pi \cdot H$$

$$P = 2B + M$$

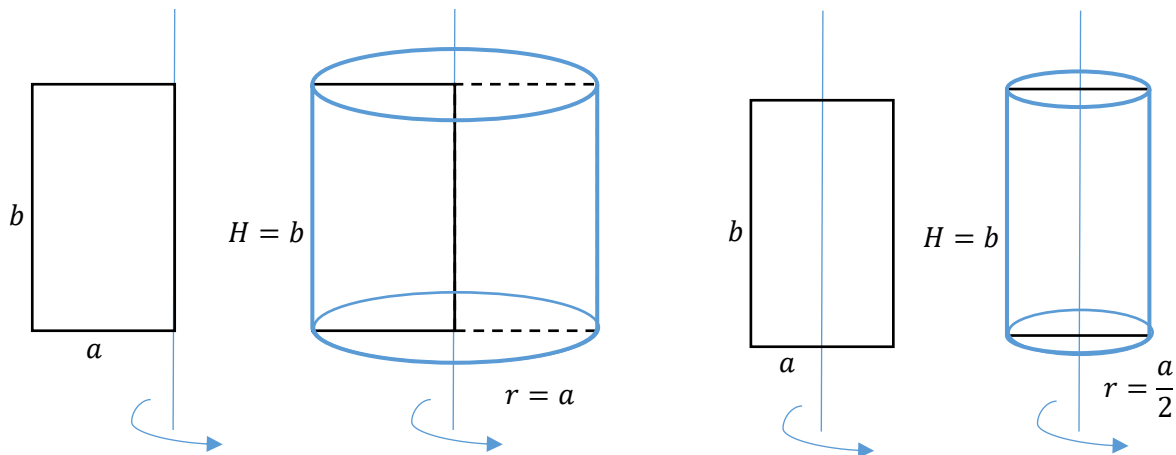
$$V = BH$$



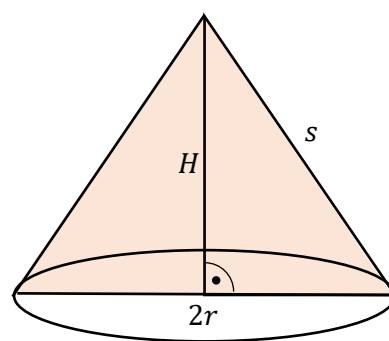
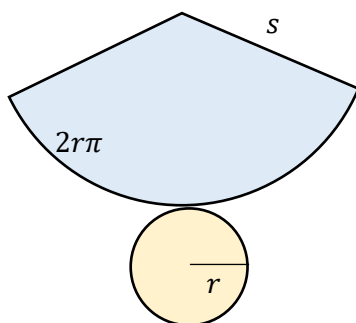
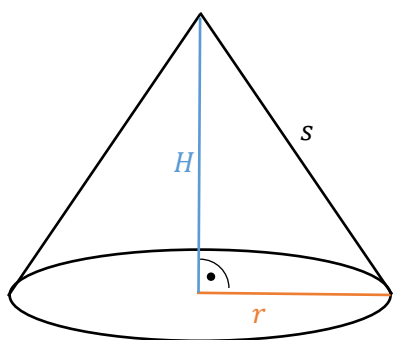
$$D^2 = H^2 + (2r)^2$$

$$P_{op} = 2rH$$

Ротацијом правоугаоника око стране или око осе настаје ваљак:



Купа



$$B = r^2\pi$$

$$M = r\pi s$$

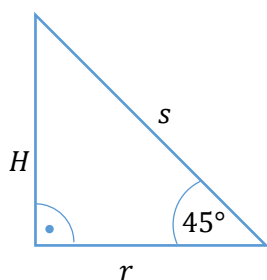
$$P = B + M$$

$$V = \frac{1}{3} \cdot BH$$

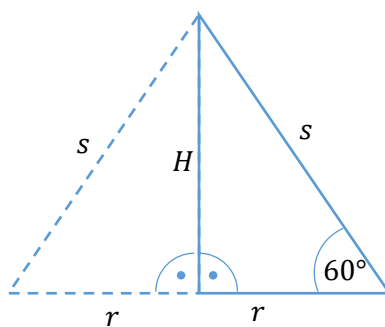
$$s^2 = H^2 + r^2$$

$$P_{op} = rH$$

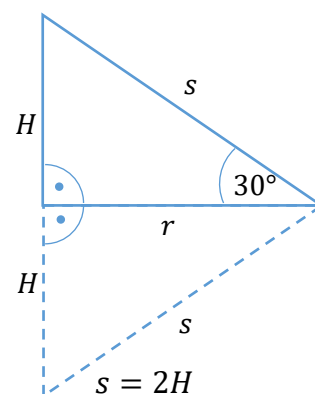
Угао између изводнице и равни основе  $\alpha(s, r) = \alpha, \alpha \in \{30^\circ, 45^\circ, 60^\circ\}$ .



$$H = r$$

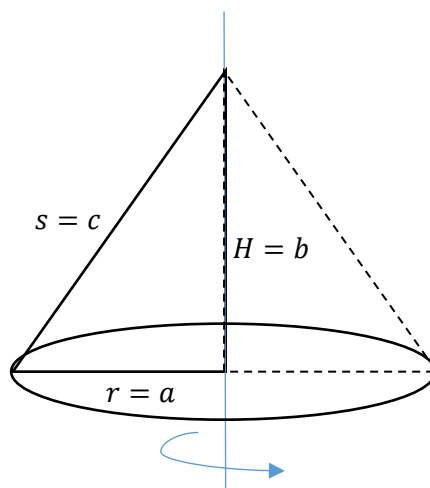
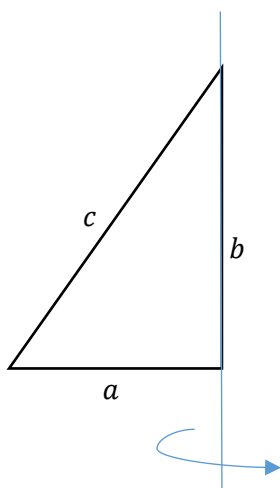


$$s = 2r$$



$$s = 2H$$

Ротација правоуглог троугла око катете.

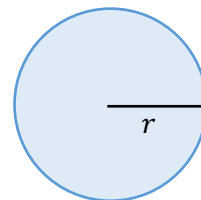
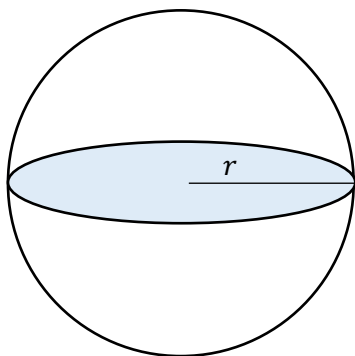


## Лопта

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

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

$$P_{vk} = r^2\pi$$



велики круг лопте