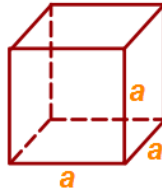


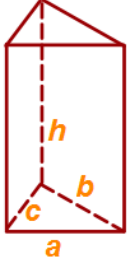
$$V = a \cdot b \cdot h$$

$$O = a \cdot b \cdot 2 + a \cdot h \cdot 2 + b \cdot h \cdot 2$$



$$V = a \cdot a \cdot a = a^3$$

$$O = a \cdot a \cdot 6$$



$$V = G_f \cdot h$$

$$G_f = W[s \cdot (s-a) \cdot (s-b) \cdot (s-c)]$$

$$s = (a+b+c) : 2$$

$$O = G_f \cdot 2 + b \cdot h + c \cdot h + a \cdot h$$

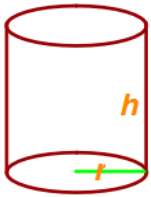


$$V = G_f \cdot h$$

$$G_f = \frac{a \cdot h_a}{2} \cdot 6$$

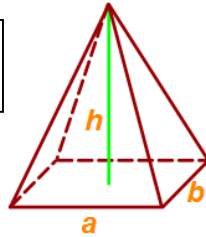
$$h_a = W[a^2 - (a/2)^2]$$

$$O = G_f \cdot 2 + a \cdot h \cdot 6$$



$$V = r^2 \cdot \pi \cdot h$$

$$O = 2 \cdot r^2 \cdot \pi + 2 \cdot r \cdot \pi \cdot h$$

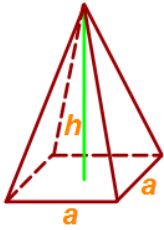


$$V = \frac{a \cdot b \cdot h}{3}$$

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

$$h_a = W[h^2 + (b/2)^2]$$

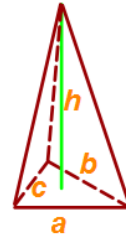
$$h_b = W[h^2 + (a/2)^2]$$



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

$$O = a^2 + \frac{a \cdot h_a}{2} \cdot 4$$

$$h_a = W[h^2 + (a/2)^2]$$



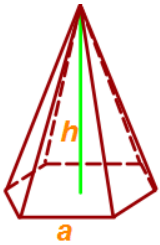
$$V = \frac{G_f \cdot h}{3}$$

$$G_f = W[s \cdot (s-a) \cdot (s-b) \cdot (s-c)]$$

$$s = (a+b+c) : 2$$

$$O = G_f + \frac{a \cdot h_a}{2} + \frac{b \cdot h_b}{2} + \frac{c \cdot h_c}{2}$$

ha, hb und hc müssen gegeben sein



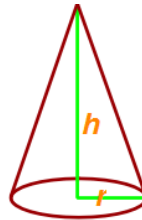
$$V = \frac{G_f \cdot h}{3}$$

$$G_f = \frac{a \cdot h_a}{2} \cdot 6$$

$$h_a = W[a^2 - (a/2)^2]$$

$$O = G_f + \frac{a \cdot h_{a2}}{2} \cdot 6$$

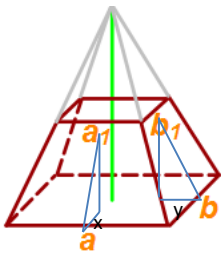
$$h_{a2} = W[h^2 + h_{a2}^2]$$



$$V = \frac{r^2 \cdot \pi \cdot h}{3}$$

$$O = r^2 \cdot \pi + \frac{2 \cdot r \cdot \pi \cdot s}{2}$$

$$s = W[h^2 + r^2]$$



$$V = \frac{a \cdot b \cdot H - a_1 \cdot b_1 \cdot h_1}{3}$$

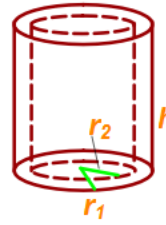
$$O = a \cdot b + a_1 \cdot b_1 + \frac{(a+a_1) \cdot h_a \cdot 2}{2} + \frac{(b+b_1) \cdot h_b \cdot 2}{2}$$

$$h_a = W[h_2^2 + x^2]$$

$$x = (b-b_1) : 2$$

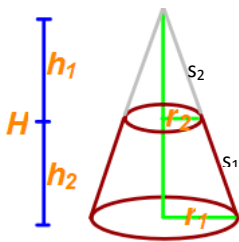
$$h_b = W[h_2^2 + y^2]$$

$$y = (a-a_1) : 2$$



$$V = r_1^2 \cdot \pi \cdot h - r_2^2 \cdot \pi \cdot h$$

$$O = (r_1^2 \cdot \pi - r_2^2 \cdot \pi) \cdot 2 + 2 \cdot r_1 \cdot \pi \cdot h + 2 \cdot r_2 \cdot \pi \cdot h$$



$$V = \frac{r_1^2 \cdot \pi \cdot H - r_2^2 \cdot \pi \cdot h_1}{3}$$

$$O = r_1^2 \cdot \pi + r_2^2 \cdot \pi + M$$

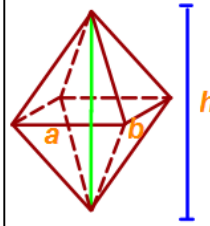
$$M = \frac{2 \cdot r_1 \cdot \pi \cdot s}{2} - \frac{2 \cdot r_2 \cdot \pi \cdot s_2}{2}$$



$$s = W[h^2 + r_1^2]$$

$$s_2 = W[h_1^2 + r_2^2]$$

Alternativformel für den Mantel:
 $M = 2 \cdot \text{Durchschnittsradius} \cdot \pi \cdot s_1$



$$V = \frac{a \cdot b \cdot (h/2) \cdot 2}{3}$$

$$O = \frac{a \cdot h_a}{2} \cdot 4 + \frac{b \cdot h_b}{2} \cdot 4$$

$$h_a = W[(h/2)^2 + (b/2)^2]$$

$$h_b = W[(h/2)^2 + (a/2)^2]$$