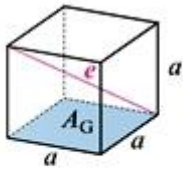


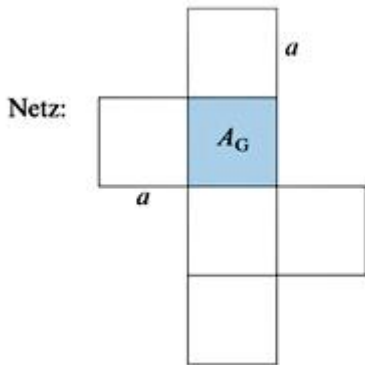
# Körper

## Würfel:

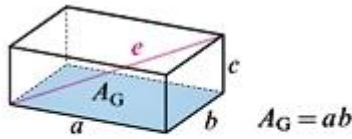


$$A_G = a^2 \quad e = a \cdot \sqrt{3}$$

$$V = a^3 \quad A_O = 6a^2$$

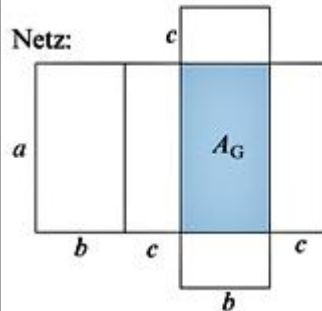


## Quader:

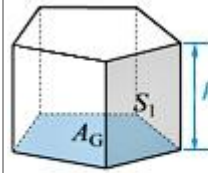


$$V = abc \quad e = \sqrt{a^2 + b^2 + c^2}$$

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

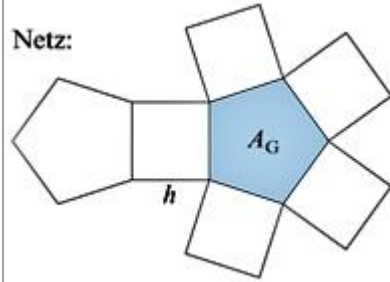


## Prisma:

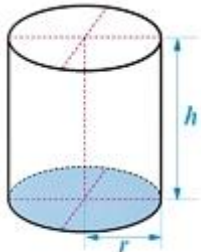


$$V = A_G \cdot h$$

$$A_O = 2A_G + S_1 + S_2 + \dots + S_n$$

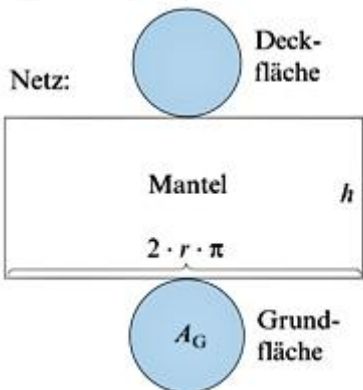


## Zylinder:

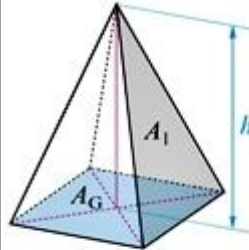


$$V = \pi r^2 h \quad A_M = 2\pi r h$$

$$A_O = 2\pi r (r + h)$$

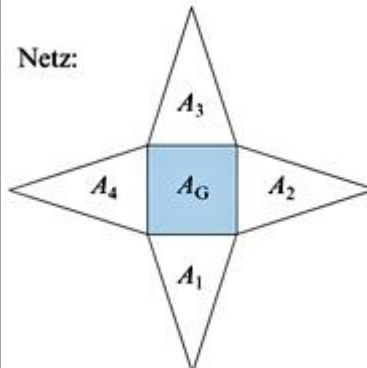


## Pyramide:

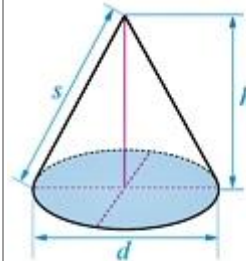


$$V = \frac{1}{3} A_G \cdot h$$

$$A_O = A_G + A_1 + A_2 + \dots + A_n$$

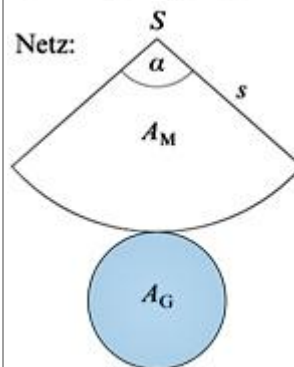


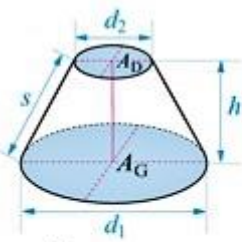
## Kegel:



$$V = \frac{1}{3} \pi r^2 h \quad ; s^2 = r^2 + h^2$$

$$A_O = \pi r (r + s) \quad ; A_M = \pi r s$$

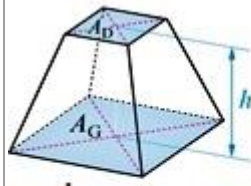


**Kreiskegelstumpf:**

$$V = \frac{1}{3} \pi h (r_1^2 + r_2^2 + r_1 r_2)$$

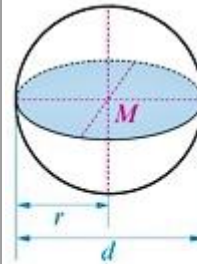
$$A_O = \pi r_1^2 + \pi r_2^2 + \pi s (r_1 + r_2)$$

$$s^2 = (r_1 - r_2)^2 + h^2$$

**Pyramidenstumpf:**

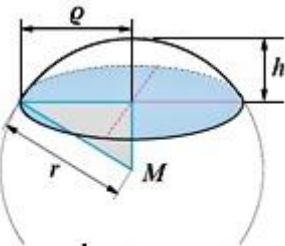
$$V = \frac{1}{3} h (A_G + \sqrt{A_G A_D} + A_D)$$

$$A_O = A_G + A_D + A_M$$

**Kugel:**

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

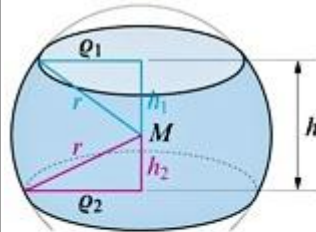
$$A_O = 4 \pi r^2$$

**Kugelabschnitt:**

$$V = \frac{1}{6} \pi h (3q^2 + h^2)$$

$$A_O = 2\pi r h + q^2 \pi$$

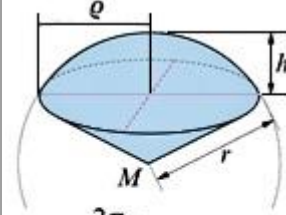
$$q = \sqrt{h(2r - h)}$$

**Kugelschicht:**

$$V = \frac{\pi h}{6} (3q_1^2 + 3q_2^2 + h^2)$$

$$A_O = 2\pi r h + \pi(q_1^2 + q_2^2)$$

$$q_1^2 = r^2 - h_1^2$$

**Kugelausschnitt (Kugelsektor):**

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

$$A_O = \pi q r + 2\pi r h$$

$$q = \sqrt{h(2r - h)}$$