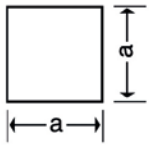
Blunk

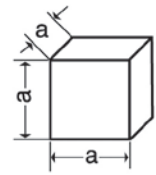
Berechnung von Flächen und Körpern



Quadrat

$A = a^2$

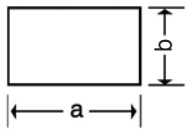
A = Fläche



Würfel

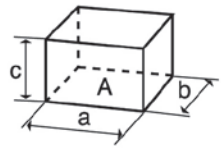
$V = a^3$

V = Volumen



Rechteck

$A = a \cdot b$

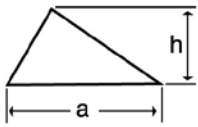


Quader

$V = A \cdot h$

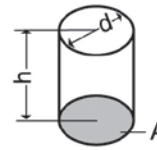
oder

$V = a \cdot b \cdot c$



Dreieck

$A = \frac{a \cdot h}{2}$



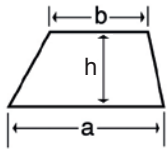
Zylinder

$V = A \cdot h$

$= \frac{\pi \cdot d^2}{4} \cdot h$

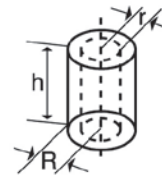
oder

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



Trapez

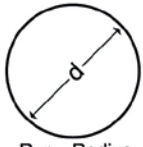
$A = \frac{a + b}{2} \cdot h$



Hohlzylinder

(Volumen der Wandung)

$V = \pi (R^2 - r^2) \cdot h$



R, r = Radius
U = Umfang

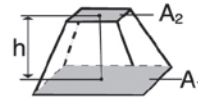
Kreis

$A = \frac{\pi \cdot d^2}{4}$

oder

$A = \pi \cdot r^2$

$U = \pi \cdot d$

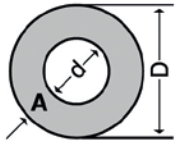


Pyramidenstumpf

Überschlag:

$V = \frac{A_1 + A_2}{2} \cdot h$

Genau: $V = h\,(A_1 + A_2 + \sqrt{A_1 \cdot A_2})$

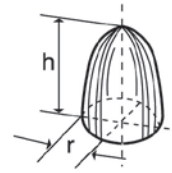


Kreisring

$A = \frac{\pi}{4} (D^2 - d^2)$

oder

$A = \pi (R^2 - r^2)$



Heuhaufen

(Paraboloid)

Überschlag:

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

π steht für eine mathematische Konstante. π = 3.14159265359, für eine Überschlagsrechnung gerundet auf ~ 3.14