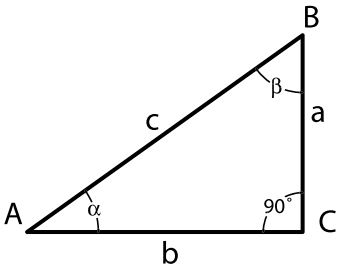
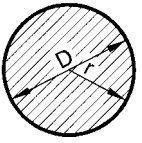
Geometric Areas and Volumes



(1) $a^2 + b^2 = c^2$, (2) $\alpha + \beta = 90^\circ$,

(3) $\sin\alpha = \frac{a}{c} = \cos\beta$ (4) $\cos\alpha = \frac{b}{c} = \sin\beta$,

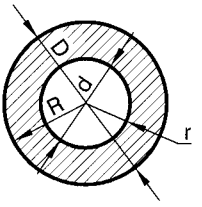
(5) $\tan\alpha = \frac{a}{b} = \cot\beta$, (6) $\cot\alpha = \frac{b}{a} = \tan\beta$.



Circle
A = area
C = circumference

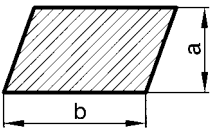
$A = \pi r^2 = \frac{\pi D^2}{4}$

$C = 2\pi r = \pi D$



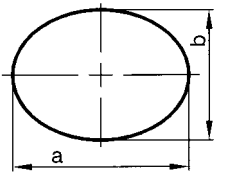
Circle Ring
A = area
C = circumference

$A = \pi (R^2 - r^2)$
$= 0.7854 (D^2 - d^2)$



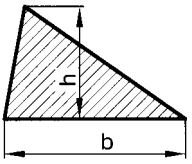
Parallelogram
A = area
C = *ab*

Note that dimension *a* is measured at right angles to line *b*.



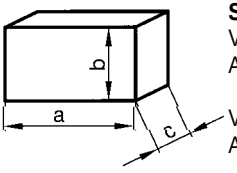
Ellipse
a = major axis
b = minor axis

$A = \frac{\pi ab}{4}$



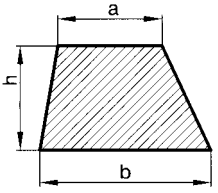
Triangle
A = area

$A = \frac{bh}{2}$



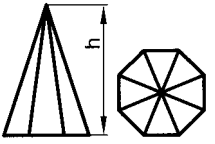
Square Prism
V = volume
A = area of surface

V = *abc*
A = 2*ab* + 2*ac* + 2*bc*



Trapezoid
A = area

$A = \frac{(a + b)\, h}{2}$



Pyramid
V = volume

V = $^1/_3 h$ x area of base.