

Vierkant

b 1

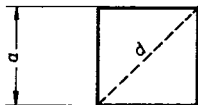
$$A = a^2$$

b 2

$$a = \sqrt{A}$$

b 3

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



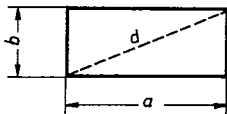
Rechthoek

b 4

$$A = a b$$

b 5

$$d = \sqrt{a^2 + b^2}$$



Parallelogramm

b 6

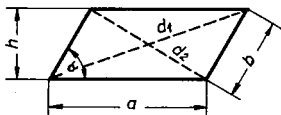
$$A = a h = a b \sin \alpha$$

b 7

$$d_1 = \sqrt{(a + h \cot \alpha)^2 + h^2}$$

b 8

$$d_2 = \sqrt{(a - h \cot \alpha)^2 + h^2}$$



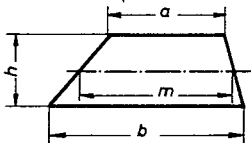
Trapezium

b 9

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

b10

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



Driehoek

b11

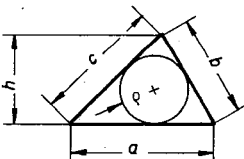
$$A = \frac{a h}{2} = \rho s$$

b12

$$= \sqrt{s(s-a)(s-b)(s-c)}$$

b13

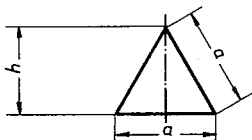
$$s = \frac{a + b + c}{2}$$



Gelijkzijdige driehoek

b 14 $A = \frac{a^2 \sqrt{3}}{4}$

b 15 $h = \frac{a \sqrt{3}}{2}$

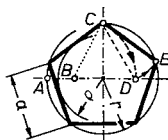


b 16 $A = \frac{5}{8} r^2 \sqrt{10 + 2\sqrt{5}}$

b 17 $a = \frac{1}{2} r \sqrt{10 - 2\sqrt{5}}$

b 18 $\varphi = \frac{1}{4} r \sqrt{6 + 2\sqrt{5}}$

Vijfhoek



Constructie:

$AB = 0,5 r; BC = BD; CD = CE$

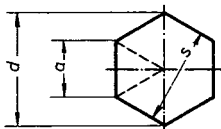
b 19 $A = \frac{3 a^2 \sqrt{3}}{2}$

b 20 $d = 2 a$

b 21 $= 1,155 s$

b 22 $s = 0,866 d$

Zeshoek



b 23 $A = 2 a s = 0,83 s^2$

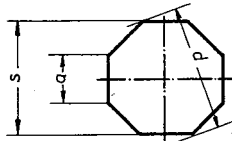
b 24 $= 2 s \sqrt{a^2 - s^2}$

b 25 $a = 0,415 s$

b 26 $s = 0,924 d$

b 27 $d = 1,083 s$

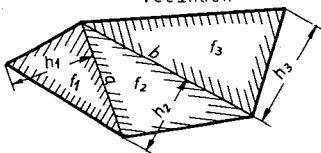
Achthoek



Veelhoek

b 28 $A = f_1 + f_2 + f_3$

b 29 $= \frac{a h_1 + b h_2 + b h_3}{2}$

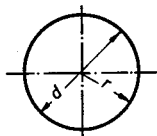


b 30 $A = \frac{\pi d^2}{4} = \pi r^2$

b 31 $= \sim 0,785 d^2$

b 32 $O = 2\pi r = \pi d$

Circel

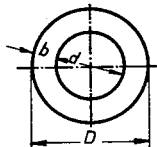


b 33 $A = \frac{\pi}{4} (D^2 - d^2)$

b 34 $= \pi b (d + b)$

b 35 $b = \frac{D - d}{2}$

Ring



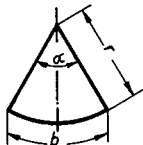
b 36 $A = \frac{\pi r^2 \alpha^0}{360^0} = r^2 \frac{\alpha}{2}$

b 37 $= \frac{br}{2}$

b 38 $b = \frac{\pi r \alpha^0}{180^0}$

b 39 $\alpha = \frac{\pi \alpha^0}{180^0}$ (\cong boogmaat in radialen)

Sector



b 40 $s = 2r \sin \frac{\alpha}{2}$

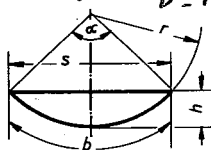
b 41 $A = \frac{h}{6s} (3h^2 + 4s^2) = \frac{r^2}{2} (\alpha - \sin \alpha)$

b 42 $r = \frac{h}{2} + \frac{s^2}{8h}$

b 43 $h = r(1 - \cos \frac{\alpha}{2}) = \frac{s}{2} \operatorname{tg} \frac{\alpha}{4}$

b 44 $\alpha \cong$ boogmaat in radialen

Segment $b = r \times \alpha$ (r)

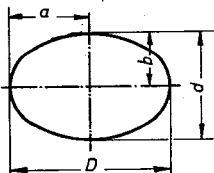


b 45 $A = \frac{\pi d D}{4} = \pi a b$

b 46 $O \approx \pi \frac{D + d}{2}$

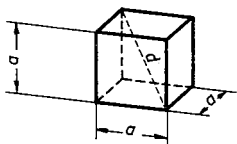
b 47 $= \pi(a+b) \left[1 + \frac{1}{4} \lambda^2 + \frac{1}{64} \lambda^4 + \frac{1}{256} \lambda^6 + \frac{25}{16384} \lambda^8 + \dots \right]$, waarin $\lambda = \frac{a-b}{a+b}$

Ellips



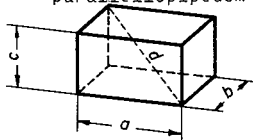
- c 1 $V = a^3$
 c 2 $A_o = 6 a^2$
 c 3 $d = a\sqrt{3}$

Kubus



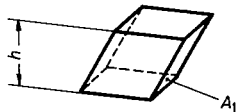
- c 4 $V = a b c$
 c 5 $A_o = 2(ab + ac + bc)$
 c 6 $d = \sqrt{a^2 + b^2 + c^2}$

Rechthoekig
parallelloipedem



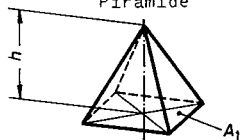
- c 7 $V = A_1 h$
 (Principe van Cavalieri)

Willekeurig
parallelloipedum



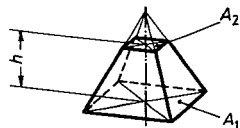
- c 8 $V = \frac{A_1 h}{3}$

Piramide



- c 9 $V = \frac{h}{3} (A_1 + A_2 + \sqrt{A_1 A_2})$
 c10 $\approx h \frac{A_1 + A_2}{2}$

Afgeknotte piramide

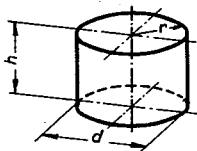


c 11 $V = \frac{\pi d^2}{4} h$

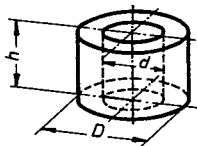
c 12 $A_m = 2\pi r h$

c 13 $A = 2\pi r(r+h)$

Cilinder



c 14 $V = \frac{\pi h}{4}(D^2 - d^2)$



c 15 $V = \frac{\pi r^2 h}{3}$

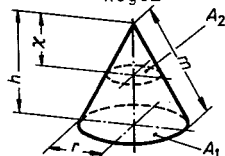
c 16 $A_m = \pi r m$

c 17 $A = \pi r(r+m)$

c 18 $m = \sqrt{h^2 + r^2}$

c 19 $A_2 : A_1 = x^2 : h^2$

Kegel

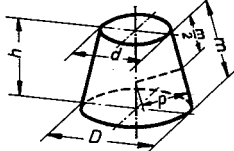


c 20 $V = \frac{\pi h}{12}(D^2 + Dd + d^2)$

c 21 $A_m = \frac{\pi m}{2}(D+d) = 2\pi p h$

c 22 $m = \sqrt{\left(\frac{D-d}{2}\right)^2 + h^2}$

Afgeknotte kegel

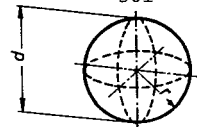


c 23 $V = \frac{4}{3}\pi r^3 = \frac{1}{6}\pi d^3$

c 24 $\approx 4,189 r^3$

c 25 $A_o = 4\pi r^2 = \pi d^2$

Bol

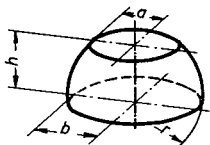


Bolschijf

$$c \ 26 \quad V = \frac{\pi h}{6} (3a^2 + 3b^2 + h^2)$$

$$c \ 27 \quad A_m = 2\pi r h$$

$$A = \pi(2rh + a^2 + b^2)$$



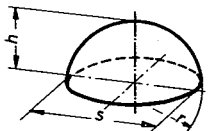
$$c \ 28 \quad V = \frac{\pi h}{6} \left(\frac{3}{4}s^2 + h^2 \right)$$

$$c \ 29 \quad = \pi h^2 \left(r - \frac{h}{3} \right)$$

$$c \ 30 \quad A_m = 2\pi r h$$

$$c \ 31 \quad = \frac{\pi}{4} (s^2 + 4h^2)$$

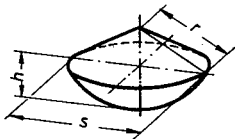
Bolsegment



Bolsector

$$c \ 32 \quad V = \frac{2}{3} \pi r^2 h$$

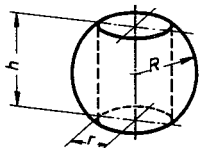
$$c \ 33 \quad A_o = \frac{\pi r}{2} (4h + s)$$



Cilindrisch doorboorde bol

$$c \ 34 \quad V = \frac{\pi h^3}{6}$$

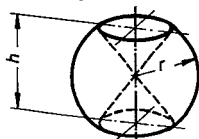
$$c \ 35 \quad A_o = 2\pi h (R + r)$$



Kegelvormig doorboorde bol

$$c \ 36 \quad V = \frac{2\pi r^2 h}{3}$$

$$c \ 37 \quad A_o = 2\pi r \left(h + \sqrt{r^2 - \frac{h^2}{4}} \right)$$



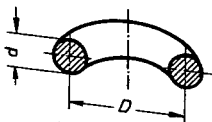
Torus

c 38

$$V = \frac{\pi^2 D d^2}{4}$$

c 39

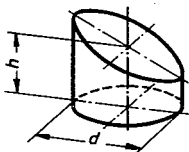
$$A_o = \pi^2 D d$$



Scheef afgeknotte cilinder

c 40

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



c 41

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

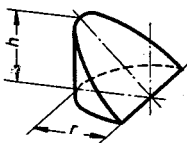
c 42

$$A_m = 2 r h$$

c 43

$$A_o = A_m + \frac{\pi r^2}{2} + \frac{\pi r \sqrt{r^2 + h^2}}{2}$$

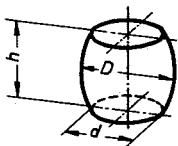
Cilinderwig



c 44

$$V = \frac{\pi h}{12} (2D^2 + d^2)$$

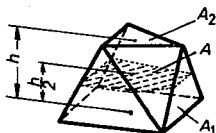
Ton



c 45

$$V = \frac{h}{6} (A_1 + A_2 + 4A)$$

Prismoïde



De inhoud van de lichamen, genoemd op de bladen C1, C2 en C3, kan met behulp van deze formule worden berekend. Dit geldt dus ook voor de bol en de boldelen.