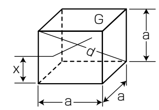
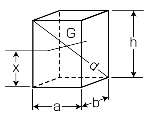
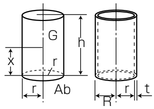
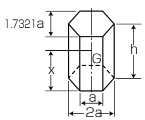
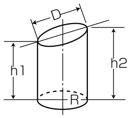
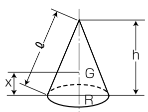
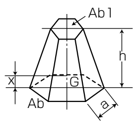
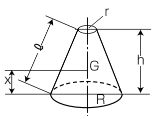
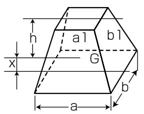
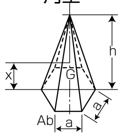
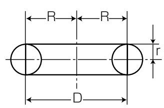
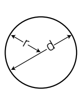
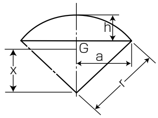
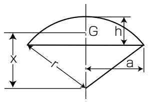
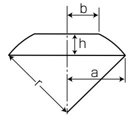
立体の容積および諸数値

V=容積、S=表面積、As=側面積、Ab=底面積、x=底面より重心までの距離

寸　法	容積および諸数値	寸　法	容積および諸数値
正方体 	$V=a^3$ $S=6a^2$ $A_s=4d^2$ $x=\frac{a}{2}$ $d=\sqrt{3}a=1.7321a$	正多角形 a=辺長 n=辺数 A_b=底面積	$V=A_bh$ $S=2A_b+nha$ $A_s=nha$ $x=\frac{h}{2}$
長方体 	$V=abh$ $S=2(ab+ah+bh)$ $A_s=2h(a+b)$ $x=\frac{h}{2}$ $d=\sqrt{a^2+b^2+h^2}$	円柱　中空円柱 	$V=\pi r^2h=A_sh$ $S=2\pi r(r+h)$ $A_s=2\pi rh$ $x=\frac{h}{2}$ $V=\pi h(R^2-r^2)$ $=\pi ht(2R-t)$ $=\pi ht(2r+t)$ $x=\frac{h}{2}$
正六角柱 	$V=2.598a^2h$ $S=5.1963a^2+6ah$ $A_s=6ah$ $x=\frac{h}{2}$ $d=\sqrt{h^2+4a^2}$	截頭円柱 	$V=\pi R^2\frac{h_1+h_2}{2}$ $A_s=\pi R(h_1+h_2)$ $D=\sqrt{4R^2+(h_2-h_1)^2}$
円垂 	$V=\frac{\pi R^2h}{3}$ $A_s=\pi R\ell$ $\ell=\sqrt{R^2+h^2}$ $x=\frac{h}{4}$	截頭角垂 	$V=\frac{h}{3}(A_b+A_{b1}+\sqrt{A_bA_{b1}})$ $A_b=\frac{3\sqrt{3}}{2}a^2=2.598a^2$ $x=\frac{h}{4}\frac{A_b+2\sqrt{A_bA_{b1}}+3A_{b1}}{A_b+\sqrt{A_bA_{b1}}+A_b}$
截頭円垂 	$V=\frac{\pi h}{3}(R^2+Rr+r^2)$ $=\frac{h}{4}[\pi a^2+\frac{1}{3}\pi b^2]$ $A_s=\pi\ell a,\ a=R+r$ $b=R-r,\ \ell=\sqrt{b^2+h^2}$ $x=\frac{h}{4}\frac{R^2+2Rr+3r^2}{R^2+Rr+r^2}$	方光体 	$V=\frac{h}{6}[(2a+a_1)b+(2a_1+a)b_1]$ $=\frac{h}{6}[ab+(a+a_1)(b+b_1)+a_1b_1]$ $x=\frac{h}{2}\frac{ab+ab_1+a_1b+3a_1b_1}{2ab+ab_1+a_1b+2a_1b_1}$
角垂 	$V=\frac{Abh}{3}$ $A_b=\frac{3\sqrt{3}}{2}a^2=2.598a^2$ $x=\frac{h}{4}$	円環 	$V=2\pi^2Rr^2=19.739Rr^2$ $=\frac{1}{4}\pi^2Dd^2=2.4674Dd^2$ $S=4\pi^2Rr=39.478Rr$ $=\pi^2Dd=9.8696Dd$
球 	$V=\frac{4\pi r^3}{3}=4.188790205r^3$ $=\frac{\pi d^3}{6}=0.523598776d^3$ $S=4\pi r^2=\pi d^2$ $r=\sqrt[3]{\frac{3V}{4\pi}}=0.620351\sqrt[3]{V}=\frac{d}{2}$	球状の楔形 	$V=\frac{2\pi r^2h}{3}$ $=2.0943951024r^2h$ $S=\pi r(2h+a)$ $=\frac{3}{8}(2r-h)$
欠球 	$V=\frac{\pi h}{6}(3a^2+h^2)=\frac{\pi h^2}{3}(3r-h)$ $A_s=2\pi Vh=\pi(a^2+h^2)$ $a^2=h(2r-h)$ $x=\frac{3(2r-h)^2}{4(3r-h)}$		$V=\frac{\pi h}{6}(3a^2+3b^2+h^2)$ $A_s=2\pi rh$ $r^2=a^2+(\frac{a^2-b^2-h^2}{2h})^2$