1.0 Selection of formula, setting of variables

1.1 Group of formulas

3D Solids (prism, pyramid, cone, cylinder, sphere...) ▼

1.2 Units of calculation

SI Units (N, mm, kW...) ▼

1.3 List of formulas

Sphere - Volume; Surface: V = 4/3 * 3.14 * r^3 ; S =4 * 3.14 * r^2 ; ......[V-Volume; r-Radius; S-Surface]
Sphere - Moment of inertia; Mass: I = 8/15 * Ro * 3.14 * r^5 ; m = 4/3 * Ro * 3.14 * r^3 ......[I-Moment of inertia; r-Radius; Ro-Density; m-Weight
Cylinder - Volume; Surface: V = 3.14 * r^2 * H; S = 2*3.14 * r * (r + H) ......[V-Volume; r-Radius; H-High; S-Surface]
Cylinder - Moment of inertia; Mass: I = 1/2 * Ro * 3.14 * r^4 * H; m = 3.14 * Ro * r^2 * H ......[I-Moment of inertia; r-Radius; H-High; Ro-Density; m-We
Frustum of cone - Volume; Surface: V = 1/3*3.14*(r2^2 + r1 * r2 + r2^2) * H; S = 3.14*(r1^2+r2^2+(r1+r2)*((r1-r2)^2+H^2)^0.5) ......[V-Volume; r
Frustum of cone - Moment of inertia; Mass: I = 3/10 * m * ((r1^5 - r2^5)/(r1^3 - r2^3)); m = 1/3*3.14 * (r1^2 + r1*r2 + r2^2) * H * Ro ......[I-Momen
Four side pyramid - Volume; Surface: V = 1/3 * A * B * H; S = A*B + 1/2 * (A * (B^2 + 4*H^2)^0.5 + B * (A^2 + 4*H^2)^0.5) ......[V-Volume; A-Side;
Four side pyramid - Moment of inertia; Mass: I = m/20 * (A^2 + B^2); m = 1/3 * A * B * H * Ro ......[I-Moment of inertia; A-Side; B-Side; H-High; Ro-De
Hexagonal prism - Volume; Surface: V = 3.4641 * r^2 * H; S = 6.9282 * r^2 + 6.9282 * r * H ......[V-Volume; r-Inradius; H-High; S-Surface]
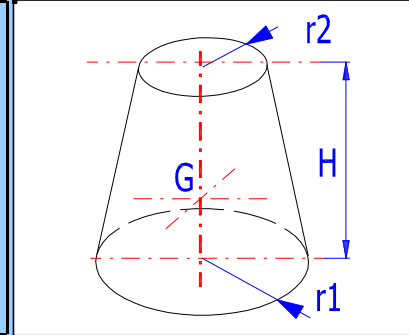Hexagonal prism - Moment of inertia; Mass: I = 1.9248 * r^4 * H * Ro; m = 3.4641 * r^2 * H * Ro ......[I-Moment of inertia; r-Inradius; Ro-Densi
Square prism - Volume; Surface: V = A * B * C; S = 2 * (A*B + A*C + B*C) ......[V-Volume; A-Side; B-Side; C-Side; S-Surface]

1.4 Frustum of cone - Volume; Surface

1.5 $V = 1/3*3.14*(r2^2 + r1 * r2 + r2^2) * H$; $S = 3.14*(r1^2+r2^2+(r1+r2)*((r1-r2)^2+H^2)^0.5)$

Volume	V	21,99114858	◉	[m^3]
Radius	r1	1	○	[m]
Radius	r2	2	○	[m]
High	H	3	○	[m]
Surface	S	45,51172807		[m^2]

1.6   ◉ Picture   ○ Tables

2.0 Listing of results