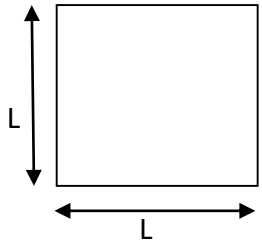
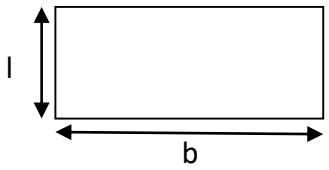
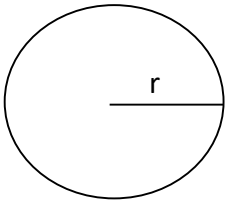
Area and Perimeter of Basic 2-D shapes



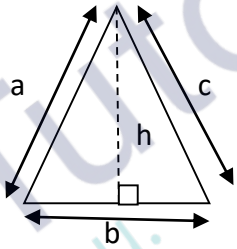
Area = L^2
Perimeter = sum of all sides = 4L



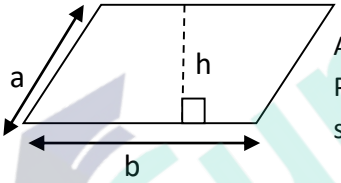
Area = l x b
Perimeter = sum of all sides = 2l + 2b



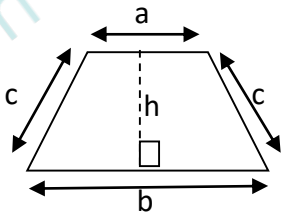
Area = πr^2
Perimeter = $2\pi r$



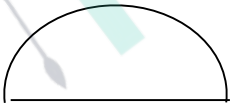
Area = $\frac{1}{2}$ x b x h
Perimeter = sum of all sides = a + b + c



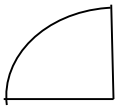
Area =b x h
Perimeter = sum of all sides = 2a + 2b



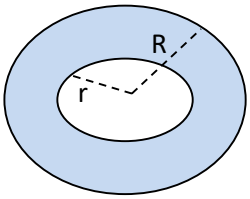
Area = $\frac{1}{2}$ x h x (sum of parallel sides) = $\frac{1}{2}$ x h x (a + b)
Perimeter =s um of all sides = a + c + b + c



Area = $\frac{\pi r^2}{2}$
Perimeter = $\frac{2\pi r}{2}$ + 2r



Area = $\frac{\pi r^2}{4}$
Perimeter = $\frac{2\pi r}{4}$ + 2r



Area = $\pi R^2 - \pi r^2$
Perimeter = sum of all sides = $2\pi R + 2\pi r$

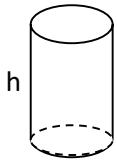
[Formulas in bold are part of formula sheet]

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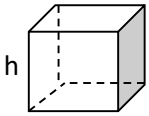
Volume and Surface Area

How to identify a **Prism**?

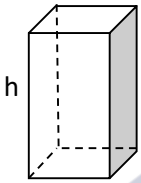
Prisms are 3-dimentional objects with identical top and base, connected by straight line called height of the prisim. Example



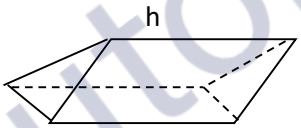
Cylinder



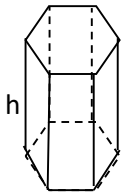
Cube



Cuboid



Triangular base prism



Hexagonal base Prism

Formulas for Prism: **[Formulas in bold are part of formula sheet]**

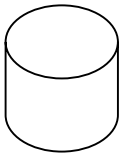
Volume = A x L (A is the cross sectional area and L is the legth)

Curved Surface Area=Base Perimeter x Height (surface area minus top and base)

Top Open Surface Area = (Base Perimeter x Height) + Base Area

Total Surface Area = (Base Perimeter x Height) + 2(Base Area)

Formulas for Cylinder



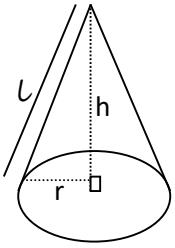
Volume = $\pi r^2 h$

Curved Surface Area = 2πrh

Top Open Surface Area = 2πrh + πr^2

Total Surface Area = 2πrh + 2πr^2

Formulas for Cone:



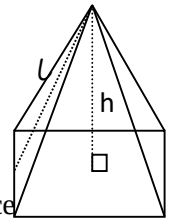
Volume = $\frac{1}{3}\pi r^2 h$

Curved Surface Area = $\pi r l$

Total Surface Area = $\pi r l + \pi r^2$

Where l is the slant height and note $l^2 = h^2 + r^2$

Formulas for Pyramid:

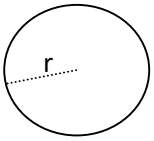


Volume = $\frac{1}{3}$ x *A* x h (A is base area)

Total Surface Area = Area of all surface

(eg in given figure TSA = area of rectangle+area of 4 triangles [height of rectangle is the slant height l])

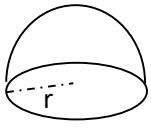
Formulas for Sphere :



Volume = $\frac{4}{3}\pi r^3$

Surface Area = $4\pi r^2$

Formulas for Hemisphere :



Volume = $\frac{2}{3}\pi r^3$

Curved Surface Area = $2\pi r^2$

Total Surface Area = $2\pi r^2 + \pi r^2$ (or $3\pi r^2$)

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