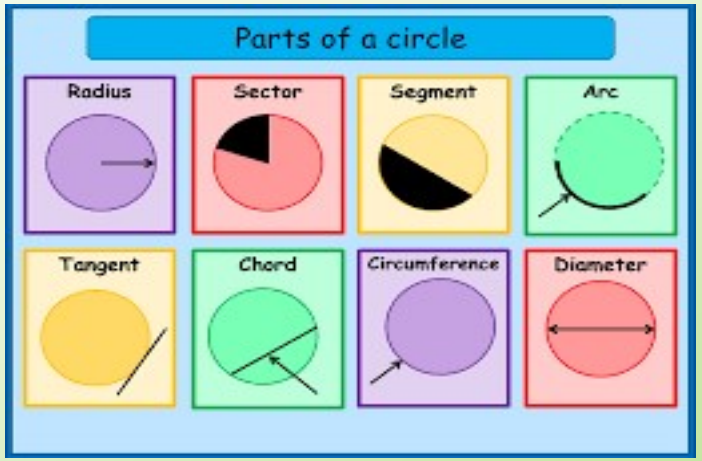
YEAR 8 HIGHER

TOPIC 3 - *2D and 3D shapes*

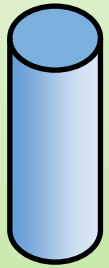
What do I need to know;

1. *sketch nets and use 2D representation of 3D shapes.*
2. *Calculate the surface area and volume of prisms.*
3. *Be able to calculate the circumference, the area and name the parts of a circle.*
4. *Calculate the radius or diameter when you know the circumference or area.*
5. *Calculate the surface area and volume of a cylinder.*
6. *Use Pythagoras' theorem in right-angled triangles.*

CIRCLES;- Area= πr^2 Circumference = $2\pi r$



Volume of Cylinder



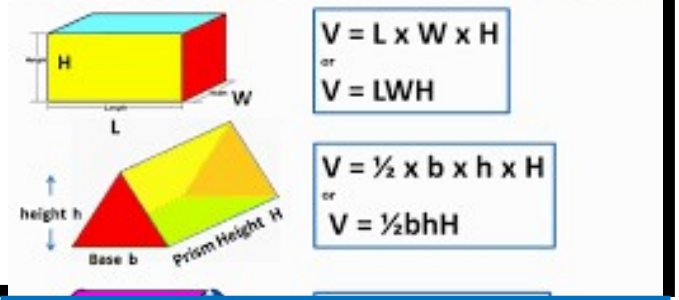
$\pi r^2 h$

$3.142 \times 3^2 \times 8$

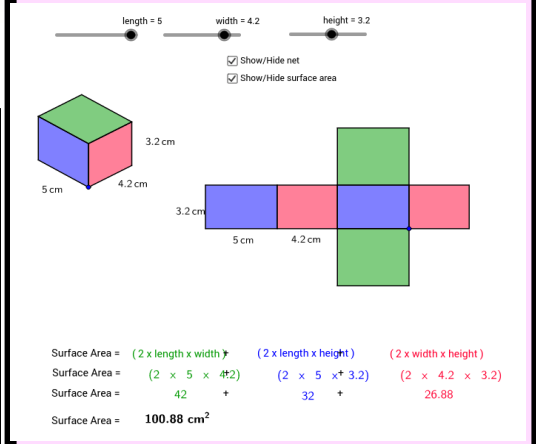
$= 3.142 \times 9 \times 8$

$= 226.195\ 6$

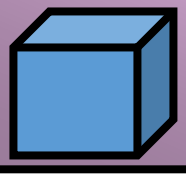
Volume of prisms = area of cross section x length

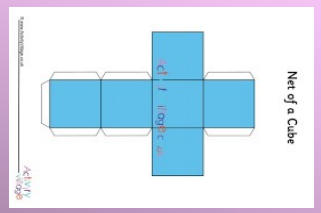


Surface Area ;- calculate the area of each side and add



Nets what a 3D shape looks like when opened out flat





Pythagoras Theorem;- Finding a side when you have two other sides in a right angled triangle

$a^2+b^2= c^2$

$3^2 + 4^2 = 25$