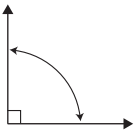
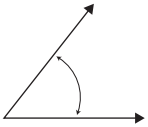
Numeracy Skills - Geometry

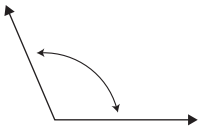
Angles and Triangles



A **right angle** is 90°

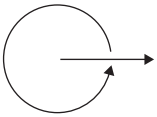


An **acute angle** is less than 90°

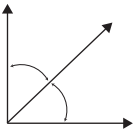


An obtuse angle is more than 90° and less than 180°

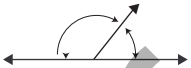
A **straight line** is 180°



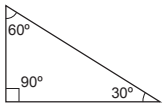
A **circle** is 360°



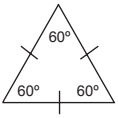
Complementary angles add up to 90°



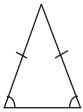
Supplementary angles add up to 180°



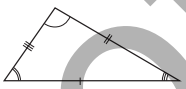
The angles in a triangle always add up to 180°



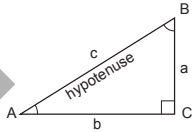
Equilateral triangle
3 equal sides;
3 equal angles of 60°



Isoceles triangle
2 equal sides;
2 equal angles

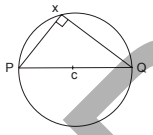


Scalene triangle
no equal sides;
no equal angles

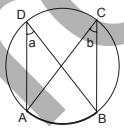


Pythagoras' theorem
$c^2 = a^2 + b^2$

Circles



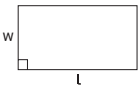
If angle X = 90°
then PQ is a diameter



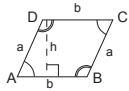
Angles in same segment
Angle a = angle b

If angle x = 2y
then C is centre of circle

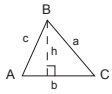
Areas and Volumes



Rectangle
Perimeter = 2 (l+w)
Area = l x w



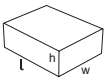
Parallelogram
Perimeter = 2(a+b)
Area = b x h



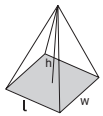
Triangle
Perimeter = a+b+c

Area = $\frac{b \times h}{2}$

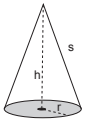
Circle
Circumference = $2\pi r$
Area = πr^2



Cuboid
Volume = l x w x h

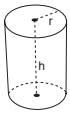


Pyramid
Volume = $\frac{l \times w \times h}{3}$



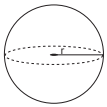
Cone
Volume = $\frac{\pi r^2 h}{3}$

Surface area = $\pi r^2 + \pi rs$



Cylinder
Volume = $\pi r^2 h$

Surface area = $2\pi r^2 + 2\pi rh$



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

Surface area = $4\pi r^2$