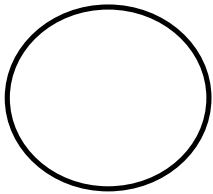


Week 6

Use your revision guide to fill in as many of the **formulae** as you can.

You need to know these for your exam.

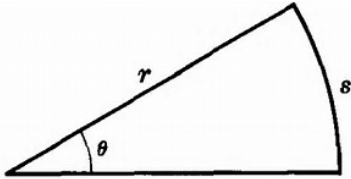


Area of a Circle

$$A = \pi \times r^2$$

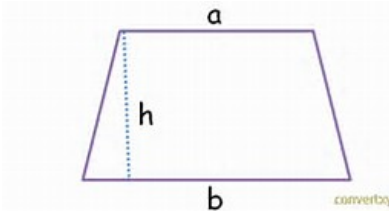
Circumference of a Circle

$$C = 2\pi r \text{ or } \pi d$$



$$\text{Area of a Sector} = \frac{\theta}{360} \times \pi \times r^2$$

$$\text{Arc Length of a Sector} = \frac{\theta}{360} \times 2\pi r$$

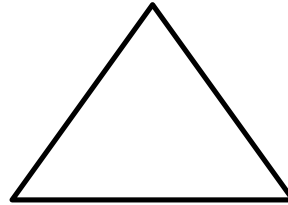
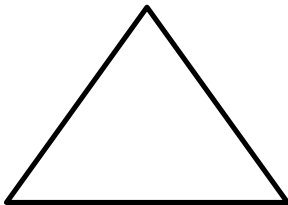


Area of a Trapezium

$$A = \left(\frac{a+b}{2}\right) \times h$$

$$\text{Speed} = \frac{\text{distance}}{\text{time}}$$

$$\text{Density} = \frac{\text{mass}}{\text{volume}}$$

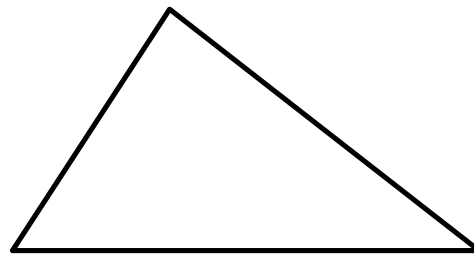


Mean from a Table = **Frequency x value, then total of the (frequency x values) divided by total frequency**

Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Sine Rule $\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$



Cosine Rule $a^2 = b^2 + c^2 - 2bc \cos A$

Use your revision guide to help you complete the following **angle facts**.

Draw pictures to go alongside the rules.

Basic Facts

Vertically opposite angles are **equal**

Base angles in an **isosceles** triangle are **equal**

Opposite angle in a parallelogram are **equal**

Parallel Lines

Alternate angles are equal (Z)

Corresponding angles are equal (F)

Co-Interior angles add up to **180°** (C)

Regular Polygons

Sum of Interior Angles = $180(\text{number of sides} - 2)$

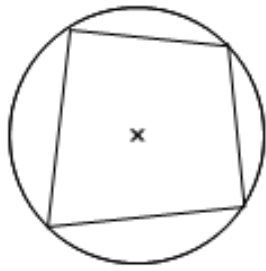
Size of each Interior Angles = $\text{Sum of interior} / \text{Number of sides}$

Exterior angles add up to **360°**

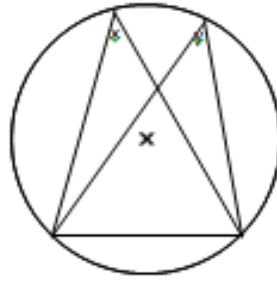
Each exterior angle = **360 / number of sides**

Exterior + Interior Angles = **180°**

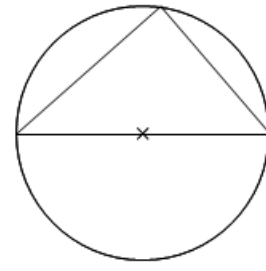
Circle Theorems



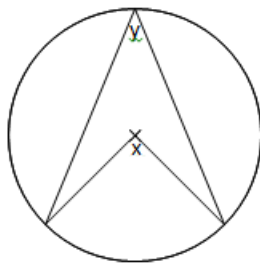
Opposite angles in a cyclic quadrilateral add to 180



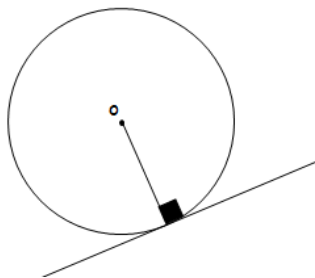
Angles in same segment are equal



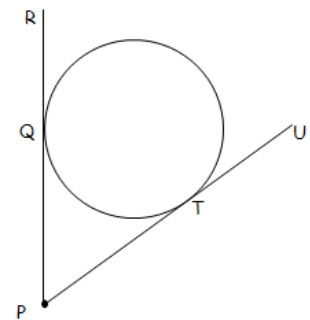
Angle in a semi circle is a right angle



Angle at the centre is twice the angle at the circumference



The tangent to a circle is perpendicular to the radius at that point



Tangents to a circle from the same point are equidistant ($PQ = PT$)