WORKSHEET 18

YEAR 09
SUBJECT: MATHEMATICS   NAME OF STUDENT: _____
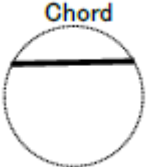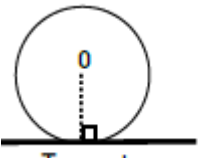
| STRAND	*GEOMETRY*
SUB-STRAND	*Angles*
Content Learning Outcome	Discover and apply properties of shapes, and angles on pairs of intersecting lines

Angles In A Circle

Objective:

- Identify different parts of a circle
- Explain the different parts of a circle
- Draw the different types of inscribed angles

Parts of a Circle

Centre	A **circle** is a closed curve with every point at fixed distance from a point called the **centre.**
Radius	The distance from the centre of the circle to any point on the circumference is called **radius.**
Diameter	The distance of a line from a point to another point on the circumference passing through the centre of the circle is called **diameter** The diameter = 2 × radius **d = 2r**
Circumfence	The **circumference or perimeter** of a circle is the distance around the circle. Circumference = π x diameter = π x 2 x radius **c = πd** or **c = 2πr**
Arc	An **arc** is part of the circumference of the circle.
	A **chord** is a straight line that joins two points on the circumference of a circle. The longest chord of any circle is the diameter of the circle. A circle has an infinite set of chords.

|	
Chord 	
O Tangent	A straight line which touches the circumference at only one point is known as the **tangent** to the line.
Sector 	Part of a circle formed by an **arc** and two **radii**. The smaller part of the circle is called the **minor sector**, and the larger part is called the **major sector**.

Inscribed Angle
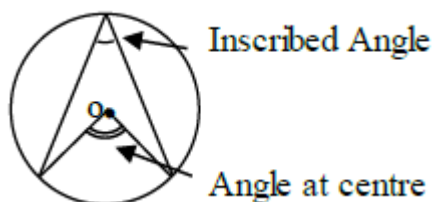
1. The inscribed angle is half of the angle at the centre of the circle that intercepts the same arc.
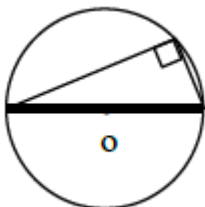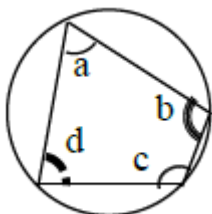

$$b = 2a$$
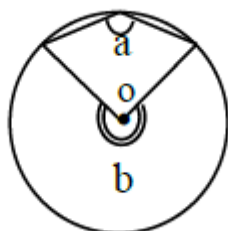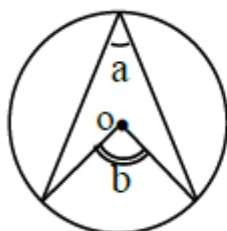
2. Angles on the same arc are always equal.

$$m = n$$
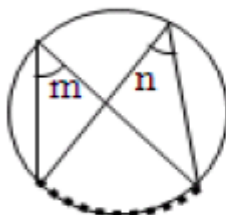
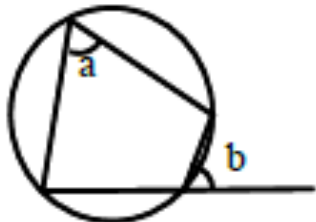3. Any angle subtended by a diameter is a right angle.

4. A **cyclic quadrilateral** is a quadrilateral inside a circle with all its 4 vertices touching the circumference of the circle.
a) The interior opposite angles are supplementary.

a + c = 180°
b + d = 180°

b) An exterior angle is equal to the opposite interior angle.
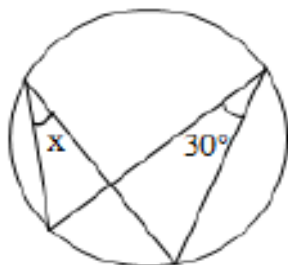

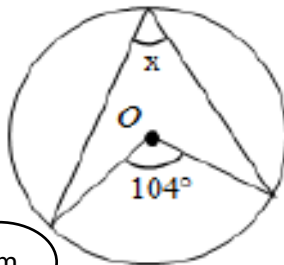Exterior angle = opposite interior angle
a = b

Exercise 8

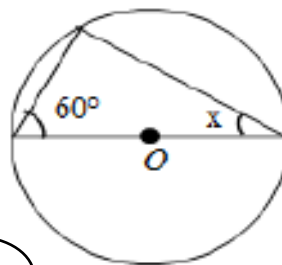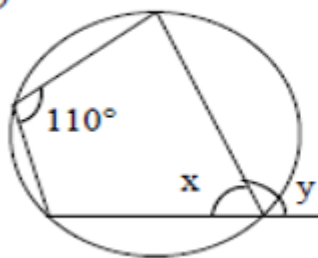1. For some circles given below, *O* is the centre. Work out the angles marked with letters:

(a)

(b)

1m

(c)

1m

1m

(d)

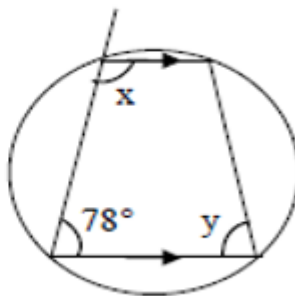2m

(e)

1m

(f)