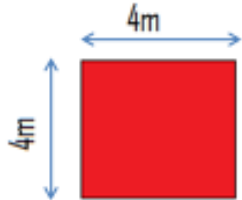


# Wood Manufacturing & Finishing Areas

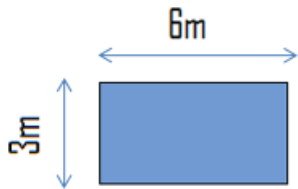
Phase 4

Lecturer Jennifer Byrne

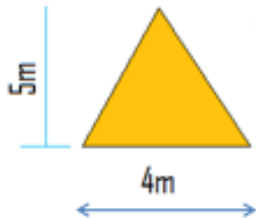
# Areas



Square Length x Width = Area  
 $4 \times 4 = 16\text{m}^2$



Rectangle Length x Width = Area  
 $6 \times 3 = 18\text{m}^2$



Triangle  $\frac{1}{2}$  Base x Perp. Height = Area  
 $\frac{1}{2} (4\text{m} \times 5\text{m}) = 10\text{m}^2$

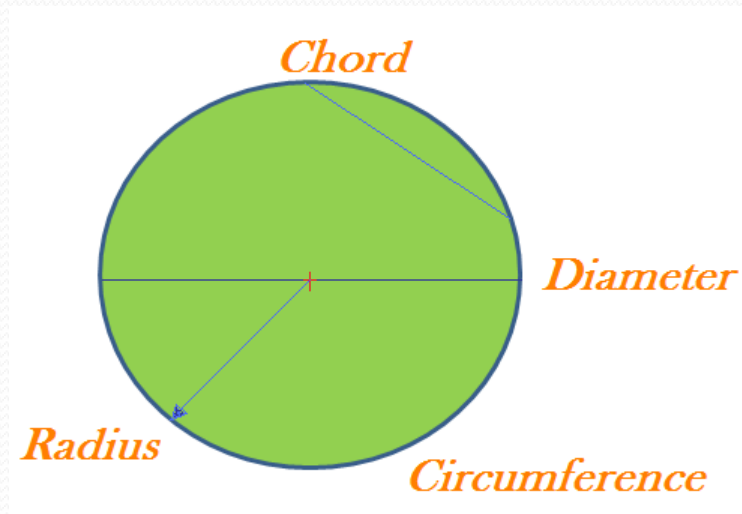


Circle  $\pi r^2 = \text{Area}$   
 $3.14 \times 3 \times 3 = 28.27 \text{ m}^2$

$\emptyset$  = diameter     $r$  = radius

# Parts of a Circle

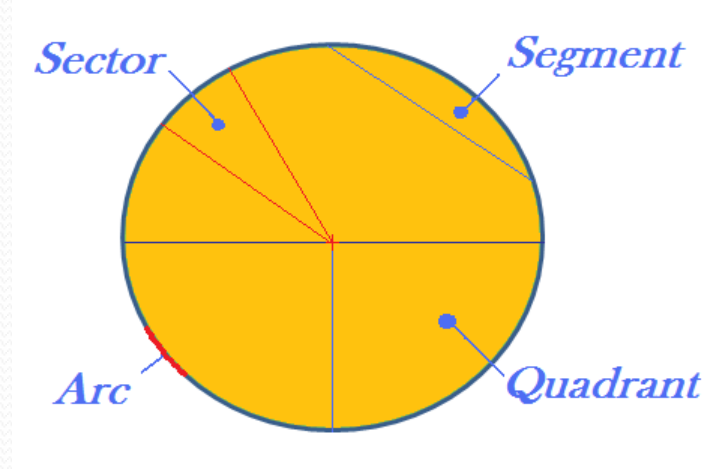
- A circle is a plane figure that has one continuous line called its **Circumference**.



- A straight line that touches the circumference in two places is called a **Chord**.
- The longest chord in a circle is the **Diameter**.
- The **Diameter** crosses the circles centre point.
- The **Radius** is the distance from the centre point to the circumference.
- Formula for Perimeter of Circle is  $2\pi r$ .
- Formula for Area of circle is  $\pi r^2$

# Parts of a Circle

- The area between a chord and the circumference is called a **Segment**.



- The area between two radii is called a **Sector**.
- A section of the circumference is called an **Arc**.
- A quarter of a circle is called a **Quadrant**.
- Half of a circle is called a **Semicircle**.
- Formula for these shapes are in the log book.

# Area Sheet 1

- Find the area of the following Squares:
  - 1 Side 32m
  - 2 Side 14m
  - 3 Side 21m
- Find the area of the following Rectangles:
  - 1 Length 4.71m width 2.1
  - 2 Length 6.23m width 3m
  - 3 Length 4.25m width 1.05
- Find the area of the following Triangles:
  - 1 Base 6 Perp. Height 4.12
  - 2 Base 3 Perp. Height 5.05
  - 3 Base 4 Perp. Height 3.31
- Find the area of the following Circles:
  - 1 Diameter = 12m
  - 2 Radius = 8.21m
  - 3 Diameter = 42m

# Area Sheet 1 Answers

- Find the area of the following Squares:
  - 1  $32 \times 32 = 1024\text{m}^2$
  - 2  $14 \times 14 = 196\text{m}^2$
  - 3  $21 \times 21 = 441 \text{m}^2$
- Find the area of the following Rectangles:
  - 1  $4.71\text{m} \times 2.1 = 9.891\text{m}^2$
  - 2  $6.23\text{m} \times 3\text{m} = 18.69\text{m}^2$
  - 3  $4.25\text{m} \times 1.05 = 4.463 \text{m}^2$
- Find the area of the following Triangles:
  - 1  $\frac{1}{2}(6 \times 4.12) = 12.36\text{m}^2$
  - 2  $\frac{1}{2} (3 \times 5.05) = 7.57\text{m}^2$
  - 3  $\frac{1}{2} (4 \times 3.31) = 6.62\text{m}^2$
- Find the area of the following Circles:
  - 1  $3.14 \times 6 \times 6 = 113.04\text{m}^2$
  - 2  $3.14 \times 8.21 \times 8.21 = 211.64\text{m}^2$
  - 3  $3.14 \times 21 \times 21 = 1384.74\text{m}^2$