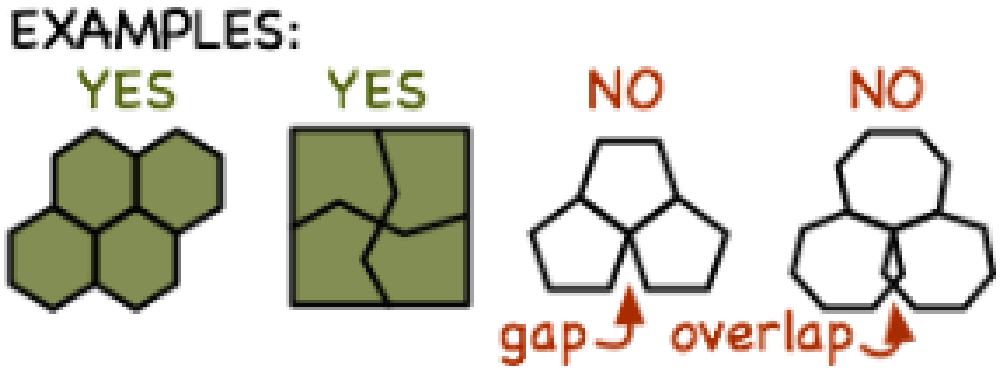
Rosary School \ Marj Elhamam

Name : _____ Date : 20 / 10 / 2025

Subject: study sheet (3) / chapter (3) Grade : 5 ( )

3.A Identify, Describe, Classify and Sketch Quadrilaterals

- A polygon is a flat, two-dimensional shape with straight sides that are fully closed.
- A quadrilateral is a two-dimensional shape with four sides and four angles.
- **Tessellation** means when we cover a surface with a pattern of flat shapes with no overlaps or gaps.



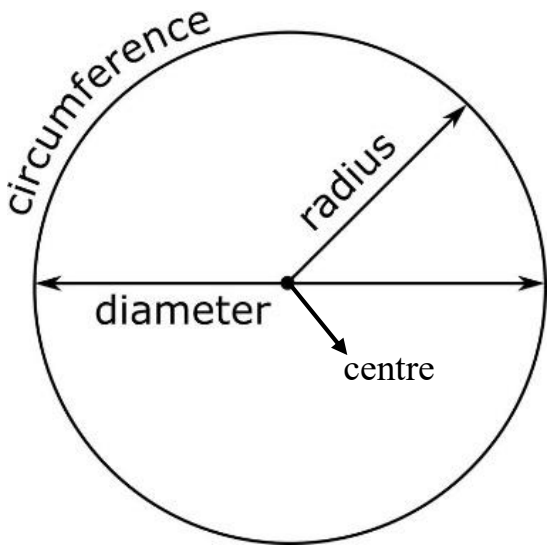
3.B Identify parts of a circle.

- **Circle:** all points in a plane that are the same distance from the centre.
- **Centre:** the fixed middle point of the circle which has same distance with any point on the circle boundary.
- **Circumference:** the boundary of a circle.

- **Diameter (d):** a line through the centre connecting two points on the circle boundary.
- **Radius (r):** a line segment from the centre to any point on the circle.

The plural of radius is radii

All radii are equal.



- Note that:
  - $d = 2 \times r$
  - $r = d \div 2$

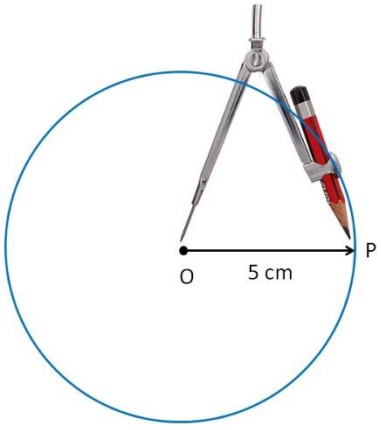
3.C Construct a Circle.

You Need:

Pencil Ruler Compass

Steps to construct a circle:

1. **Make a point** on your paper.
   → This is the **centre** of your circle (O).
2. **Open the compass** to the size you want.
   → This length is called the **radius** for example 5 cm
3. **Put the sharp point** of the compass (compass needle) on the center.
4. **Turn the compass** all the way around **without lifting it**.
5. When you reach the start point again (p), your **circle is complete!**

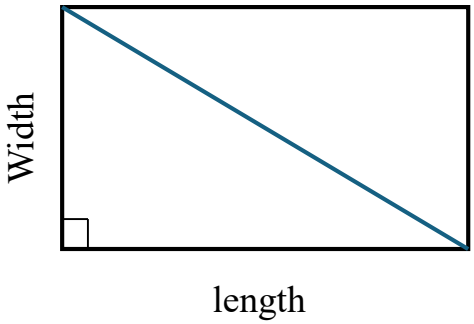


❖ 3.D Area of triangles:

The area of a right-angled triangle can be found by calculating the area of a rectangle then dividing the answer by two.

Area of rectangle = length x width.

Area of triangle = length × width ÷ 2



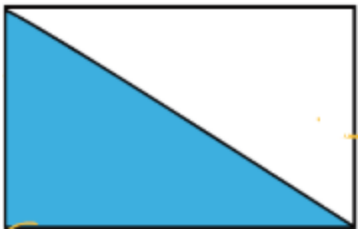
Worked examples:

1) The area of the rectangle is 160 cm². Find the area of the shaded triangle.

Area of shaded triangle = Area of rectangle ÷ 2

= 160 ÷ 2

= 80 cm²

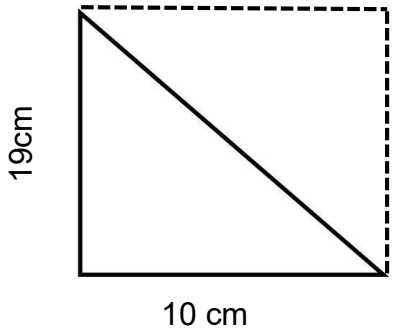


2) Find the area of this triangle.

Area of triangle = length × width ÷ 2

= 10 × 19 ÷ 2

= 95 cm²

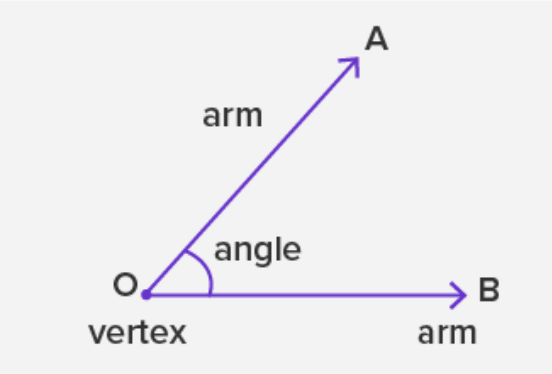


3.E classify, estimate, measure and draw angles.

An angle is formed by two rays (arm) that share a common endpoint, or vertex

Parts of Angles

- **Vertex:** A vertex is a corner of an angle, a point where two lines/sides meet. O is the vertex in the given figure.
- **Arms:** The two sides of the angle, joined at a common endpoint. OA and OB are arms of an angle.

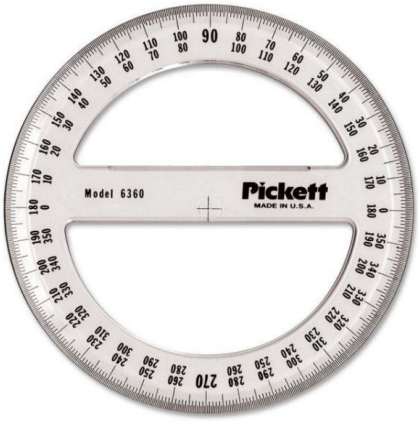


The size of the angle depends on how widely or narrowly the two arms are spread apart. The wider open an angle is, the greater its measure.

Angles are measured in degree from 0° to 360°.

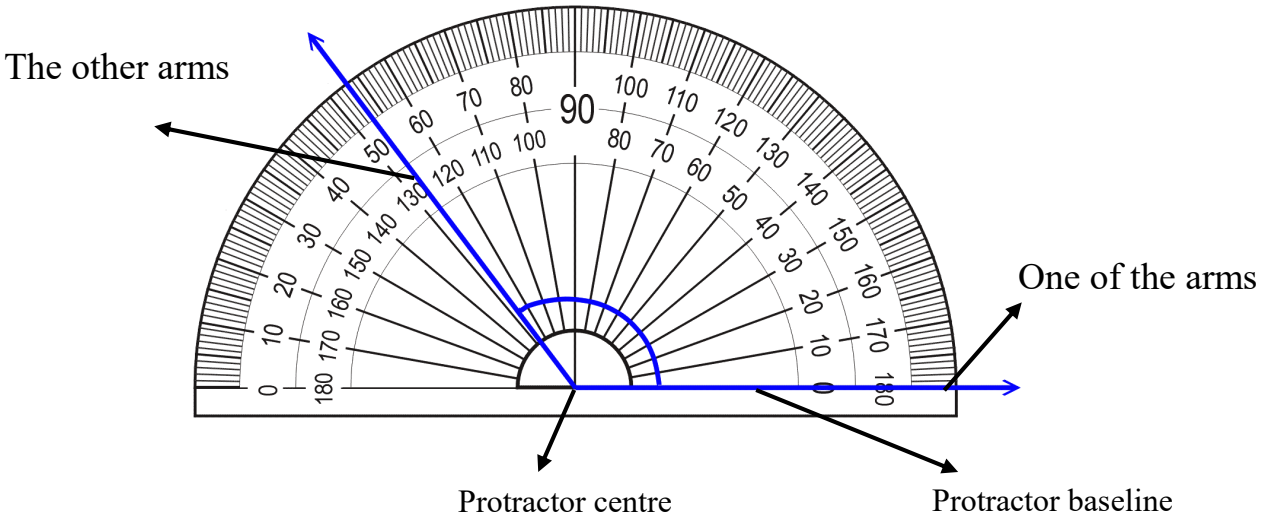
We can measure the size of any angle using a protractor.

Here are two types of protractors.



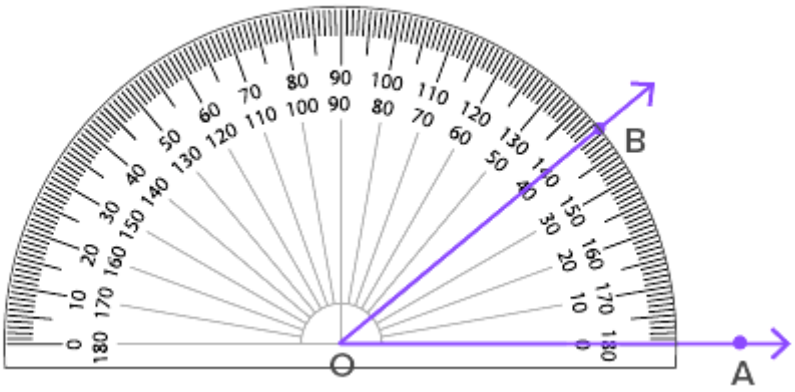
How to measure an Angle.

1. Use a protractor.
2. Align protractor center hole with the angle's vertex.
3. Align protractor straight baseline with one of the arms.
4. Read the measurement in degrees where the other arm crosses the curved scale.



How to Construct an Angle (using protractor)

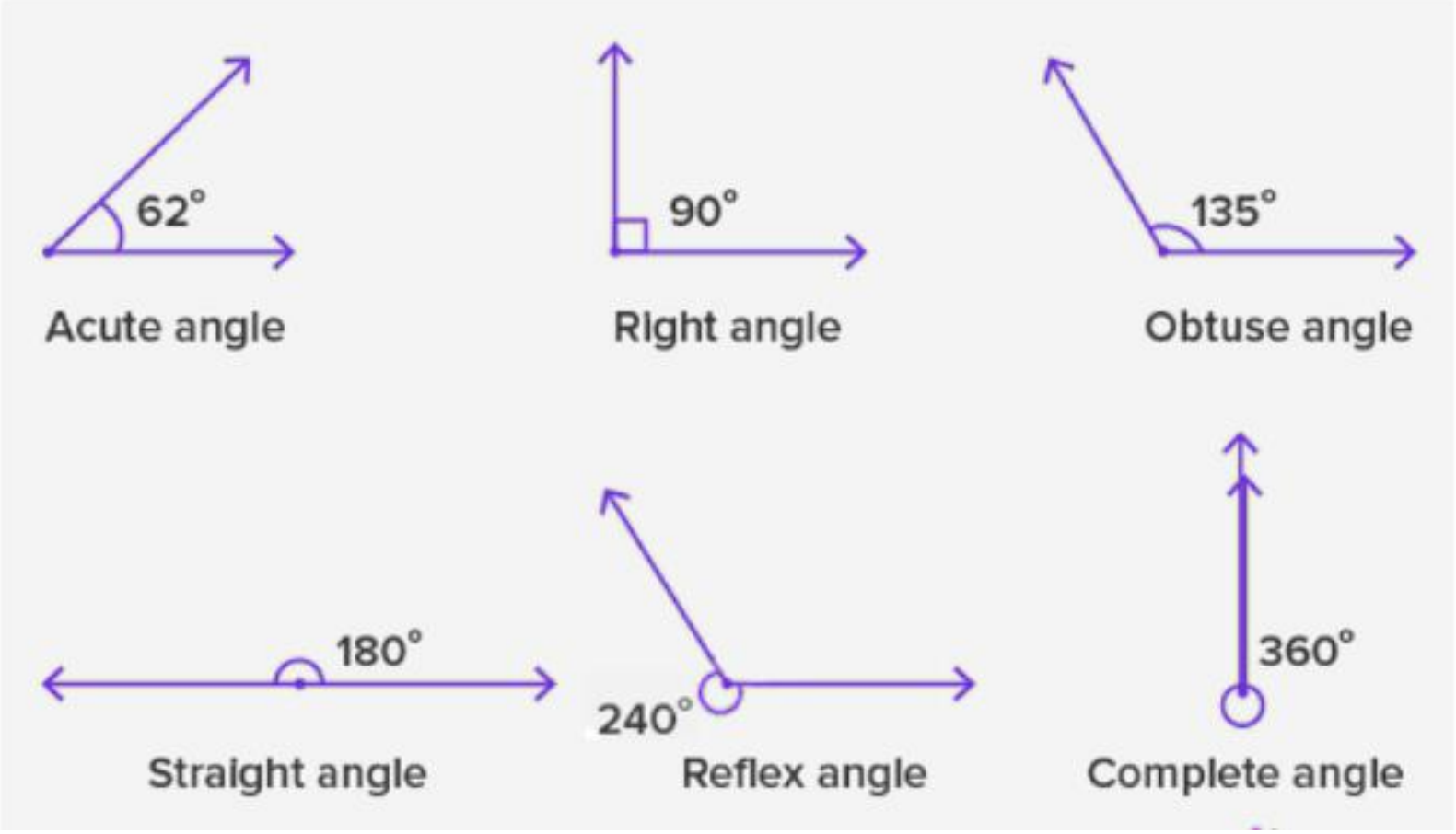
1. Draw a ray OA of any length.
2. Now, place the protractor at that point, and its midpoint should touch the marked point O.
3. Now mark the point as B on the top circular part of a protractor, according to the preferred angle for example 40°.
4. Draw a straight line joining those two points, O and B.
5. Mark the degree of the angle made where two sides of the straight line intersect.



Types of Angles

Based on their measurements, here are the different types of angles:

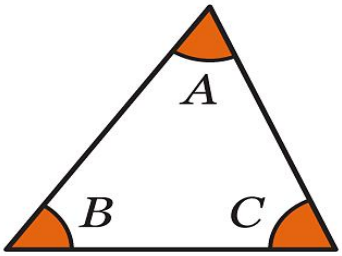
- An **acute angle** measures less than 90° at the vertex.
- An **obtuse angle** is between 90° and 180°.
- A **right angle** precisely measures 90° at the vertex.
- An angle measuring exactly 180° is a **straight angle**.
- A **reflex angle** measures between 180°- 360°.
- A **complete** angle measure equals 360°.A **complete** angle measure equals 360°.



- ❖ To measure a reflex angle, measure the angle inside the arms then subtract it from 360°.
- ❖ To draw a reflex angle, subtract it from 360° and draw the answer then label the angle outside the arms.

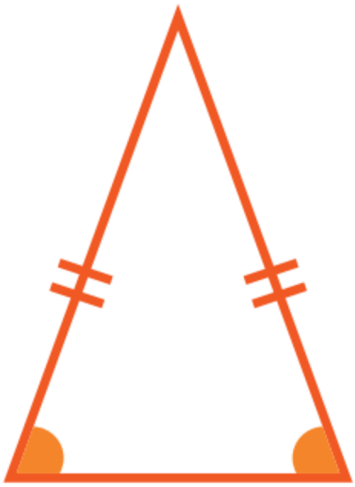
❖ **3.F Find angles in triangles .**

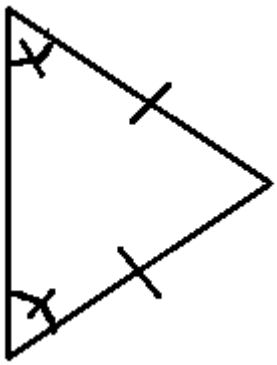
❖ The rule is that the three angles inside any triangle always add up to 180˚.

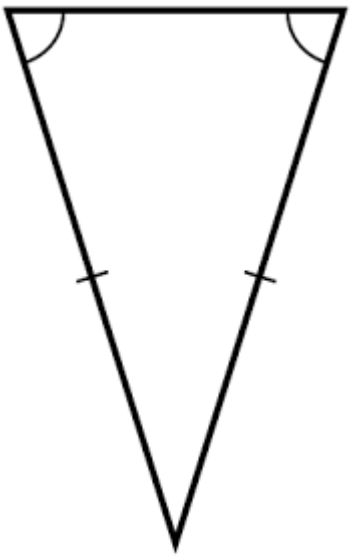


$$A + B + C = 180°$$

❖ The isosceles triangle has two equal sides and two equal angles.







Angles opposite to equal sides are equal.