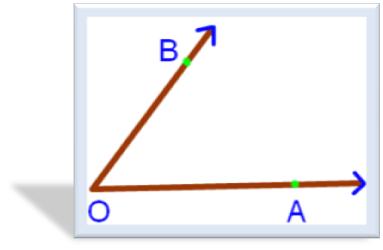
**Angles**

ANGLE:

When two rays have a common end point they from an angle. In this figure two rays OA and OB have a common end point O. So they form an angle AOB. The common end point is called the **Vertex** and rays OA and OB are the **arms** of the angle.

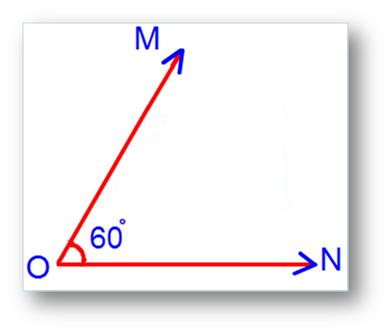
[](https://www.math-only-math.com/images/angle.jpg)In the above figure, AOB is angle whose two arms are the rays OB and OA. The symbol for an angle is < and angle AOB can be written as <AOB. Every angle has a measure. The unit of measurement of an angle is degree (°). In a figure the measure of an angle is generally written between the arms of the angle, close to the vertex.

**Always remember, while naming the angle, the vertex is always in the centre.**The figure formed by two rays with the same initial point is called an ***angle***.

**Types of Angles**

**1. Acute Angle:**

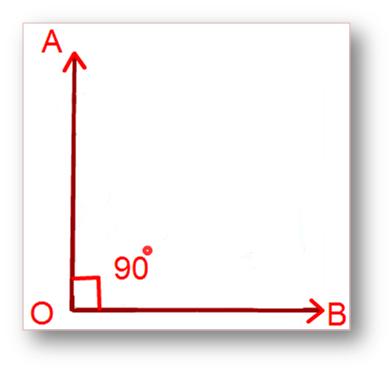
An angle whose measure is less than 90° is called an **acute angle**.

[](https://www.math-only-math.com/images/acute-angle.jpg)

∠MON shown in adjoining figure is equal to 60°. So, ∠MON is an **acute angle**.

**2. Right Angle:**

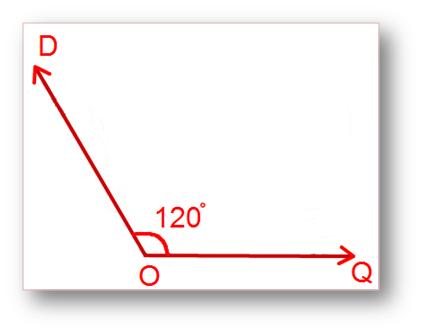
An angle whose measure is 90° is called **right angle**.

[](https://www.math-only-math.com/images/right-angle.jpg)

In the above figure, ∠AOB is a right angle. In this case, we say that the arms OA and OB are perpendicular to each.Therefore, ∠AOB shown in adjoining figure is 90°.  
So, ∠AOB is a **right angle**.

**3. Obtuse Angle:**

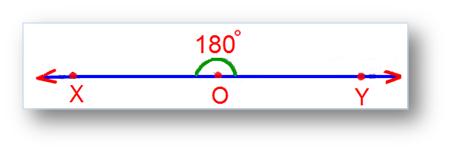
An angle whose measure is greater than 90° but less than 180° is called an obtuse angle.

[](https://www.math-only-math.com/images/obtuse-angle.jpg)

∠DOQ shown in the above figure is an **obtuse angle**.

**4. Straight Angle:**

An angle whose measure is 180° is called a **straight angle**.

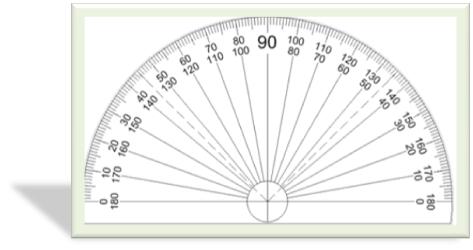
[](https://www.math-only-math.com/images/straight-angle.jpg)

[**2Save**](https://www.pinterest.com/pin/create/button/?guid=1TWy22GKCwCD-6&url=http%3A%2F%2Fwww.math-only-math.com%2Ftypes-of-angles.html&media=https%3A%2F%2Fwww.math-only-math.com%2Fimages%2Fstraight-angle.jpg&description=Straight%20Angle)

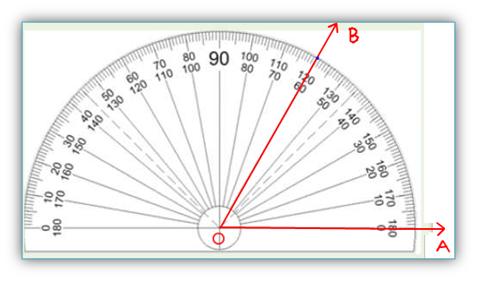
∠XOY shown in the above figure is a **straight angle**.  
  
A **straight angle** is equal to two right angles.

### Protractor:

It is an instrument for measuring or constructing an angle of a given measure. It is a circular or semicircular piece of metal or plastic.



**For Example:**  
  
**1.** Use your protractor to draw 60°.

[](https://www.math-only-math.com/images/60-degree-shown-on-a-protractor.jpg)

The centre O of the piece is also the midpoint of its base line. In order to measure ∠AOB, place the protractor in such a way that its centre is exactly on the vertex O of the angle, the base line lies along the arm OA. We need to read the mark through which the arm OB passes, starting from O on the side A, as we observe in the above figure.