System of Measurement of Angles

There are three system for measuring angles

(1) **Sexagesimal or English system:** Here a right angle is divided into 90 equal parts known as degrees. Each degree is divided into 60 equal parts called minutes and each minute is further divided into 60 equal parts called seconds. Therefore,   1 right angle = 90 degree $(= 90^o)$

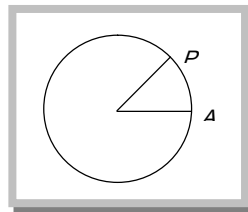$1^o = 60$ minutes $(= 60^{'})$

$1' = 60$ second $(= 60'')$

(2) **Centesimal or French system :** It is also known as French system, here a right angle is divided into 100 equal parts called grades and each grade is divided into 100 equal parts, called minutes and each minute is further divided into 100 seconds. Therefore,

1 right angle = 100 grades $(= 100^g)$

1 grade = 100 minutes $(= 100')$

1 minute = 100 seconds $(= 100'')$

(3) **Circular system:** In this system the unit of measurement is radian. One radian, written as 1^c, is the measure of an angle subtended at the centre of a circle by an arc of length equal to the radius of the circle.

Consider a circle of radius r having centre at O. Let A be a point on the circle. Now cut off an arc AP whose length is equal to the radius r of the circle. Then by the definition the measure of $\angle AOP$ is 1 radian $(= 1^c)$.