

MATHEMATICS

CLASS NOTES FOR CBSE

Chapter 06. Lines and Angles

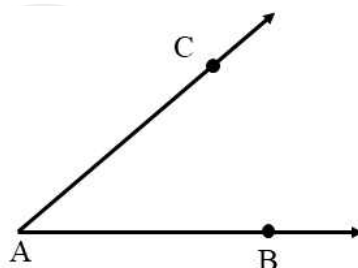
01. Angles

Angles

An angle is the union of two non-collinear rays with a common initial point.

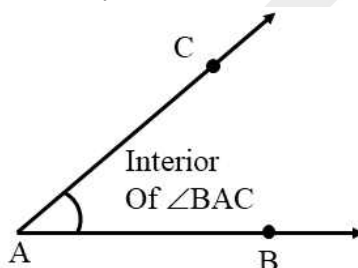
The two rays forming an angle are called the “arms” of the angle and the common initial point is called the “vertex” of the angle.

The angle formed by the rays AB and AC as shown in Fig. is denoted by the $\angle BAC$ or $\angle CAB$.



Interior of an Angle

The interior of an angle BAC is the set of all points in its plane, which lie on the same side of AB as C and also on the same side of AC as B .



Exterior of an Angle

The exterior BAC is the set of all points in its plane, which do not lie on the angle or in its interior.

Congruent Angles

Two angles are said to be congruent if a trace of one can be superposed on the other to cover it completely and exactly.

If $\angle BAC$ is congruent of $\angle FEG$, then we write $\angle BAC \cong \angle FEG$. Congruent angles will be called equal angles and we shall write $\angle BAC = \angle FEG$ instead of writing $\angle BAC \cong \angle FEG$.



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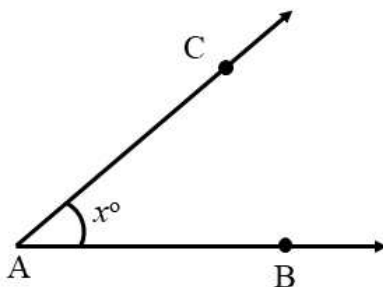
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02. Measure of an Angle

Angle Measure Axiom

Every angle has a measure. The unit of angle measure is a standard angle, called a “degree”.

The measure of an angle in degrees is a real number lying between 0 and 180° .



Congruent Angle Measure Axiom

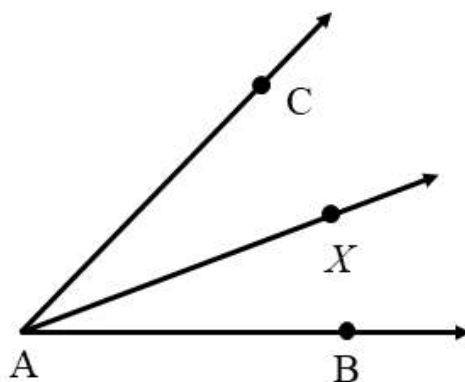
Two congruent angles have the same measure and conversely two angles of equal measure are congruent.

Thus, $\angle BAC = \angle DEF \Leftrightarrow m \angle DEF$

Angle Addition Axiom

If X is a point in the interior of $\angle BAC$, then

$$m \angle BAC = m \angle BAX + m \angle XAC$$



03. Types of Angles

Right Angle

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



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