CONSTRUCTING ANGLES

When two lines meet they form an angle.

Kinds of angles

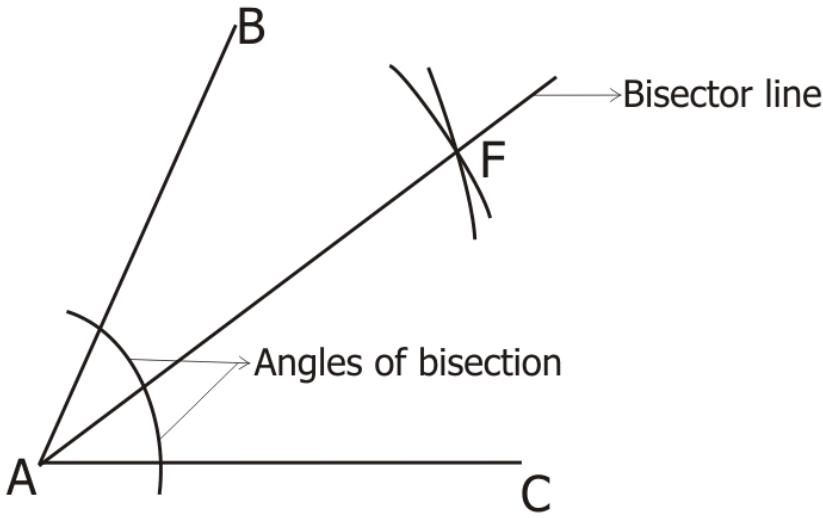
An acute angle is less than 90^{o}; an obtuse angle is greater than 90^{o} and less than 180^{o}; a reflex angle is greater than 180^{o}.

Angles are measured in degrees (^{o}) and minutes ('). There are 360 degrees in a circle. Angles can be drawn and measured with a protractor.

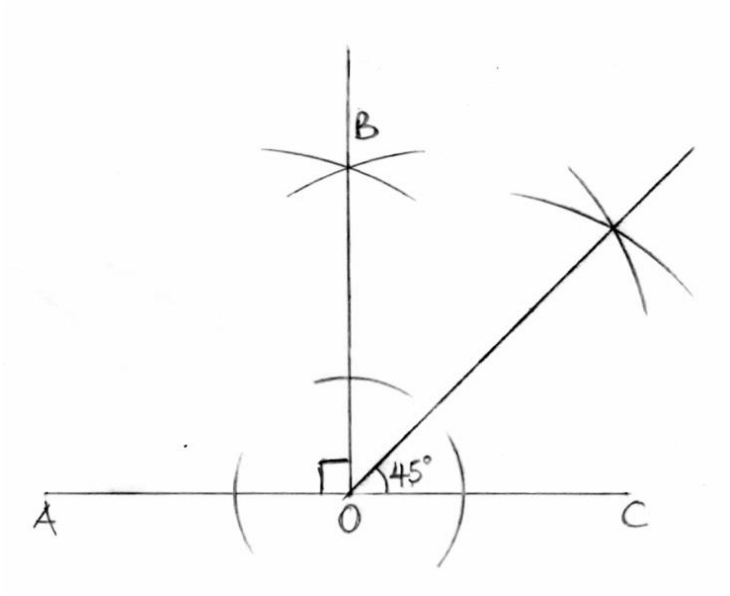
To bisect a given angle

1. Draw the given angle BAC
2. With centre A and any convenient radius draw an arc to cut BA at D and AC at E.
3. With centre D and any radius draw an arc.
4. With centre E and the same radius draw an arc to intersect the previous one at F.

5. Join AF. The angles that AF forms with AC and AB are the angles of bisection.

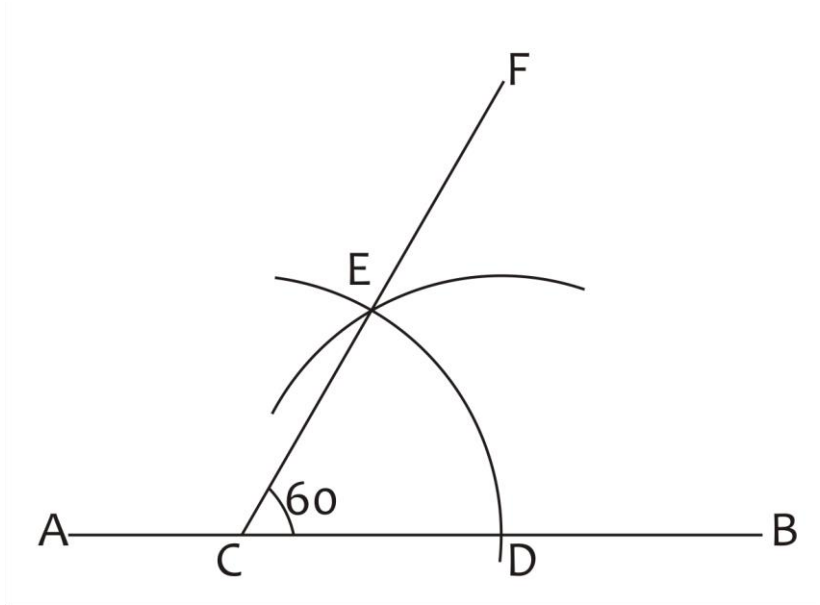


To construct angle 45°



1. Draw a straight line, AOC.
2. Construct a perpendicular line of bisector at O to point B.
3. Bisect the right angle or perpendicular angle formed to obtain a 45° angle.

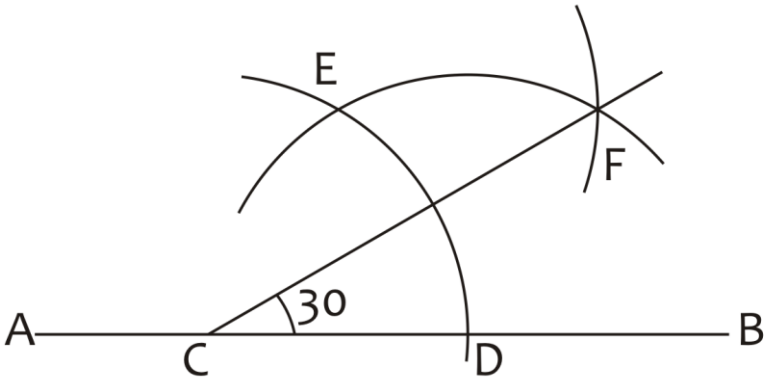
To construct angle 60^{o}



1. Draw a line AB.
2. Indicate point C anywhere on AB.
3. With C as centre and any convenient radius draw an arc to cut AB at D.
4. With centre D and the same radius draw an arc to cut the previous one at E.
5. Draw a line from C through E (line CF). $\angle FCB$ is 60^{o}.

To construct an angle of 30^o

1. Construct an angle of 60^o.
2. Bisect the angle.
3. The bisected angle yields two $\angle 30^o$s.



To construct an angle of 15°

1. Construct an angle of 30°.
2. Bisect the 30° angle.
3. One of the bisected angles is 15°.

