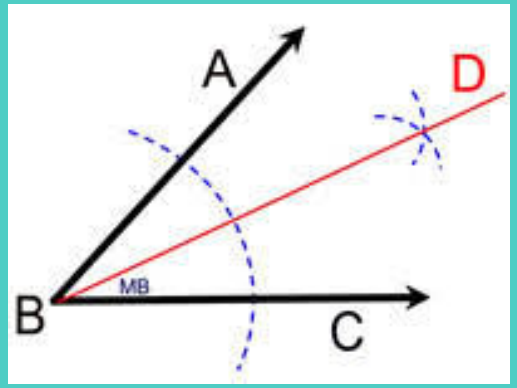
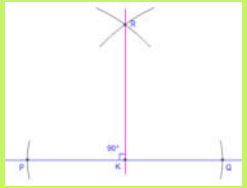
Lesson 5: Construction Techniques 3: Perpendicular Lines and Angle Bisectors



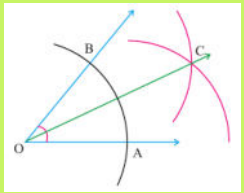
Lesson Summary

We can construct a line that is perpendicular to a given line.

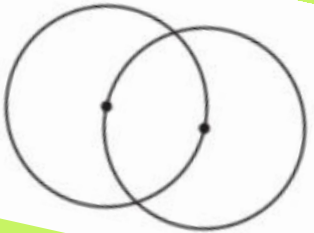


The line that bisects an angle is called the **angle bisector**.

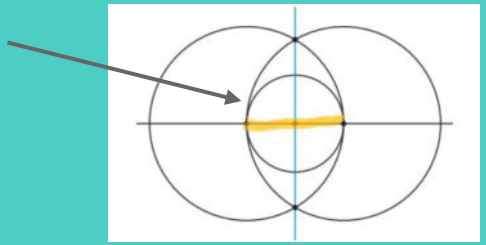
We can also bisect a given angle using only a straightedge and compass.

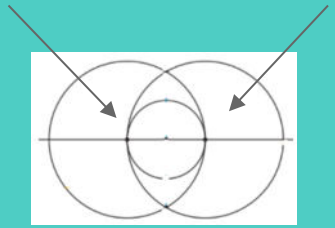


Both constructions use 2 circles that go through each other's centers:



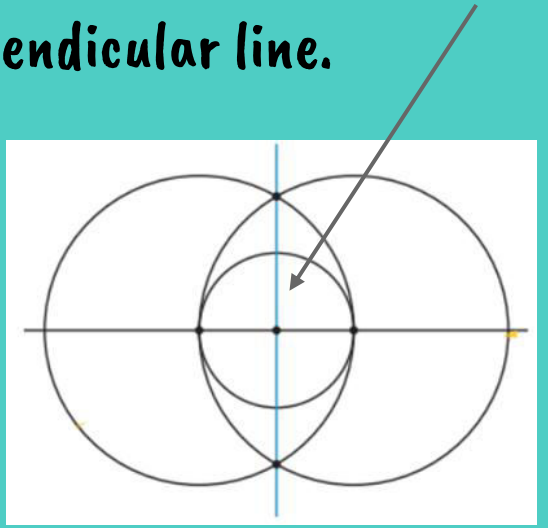
For the perpendicular line, start by finding 2 points on the line the same distance from the given point.



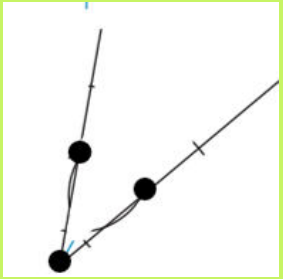


Then create the 2 circles that go through each other's centers.

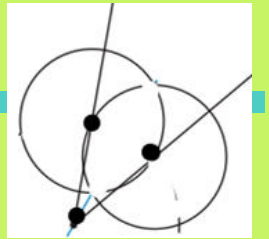
Last connect the intersection points of those circles to draw a perpendicular line.



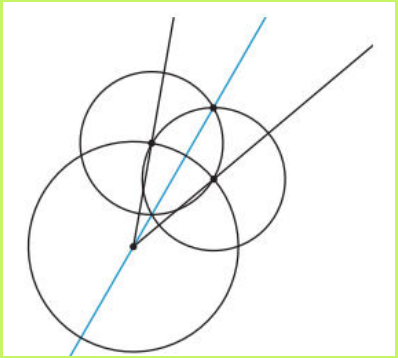
For the angle bisector, start by finding 2 points on the rays the same distance from the vertex.



Then create the 2 circles that go through each other's centers.



Connect the intersection points of those circles to draw the angle bisector.



We can think of creating a perpendicular line as bisecting a 180 degree angle!