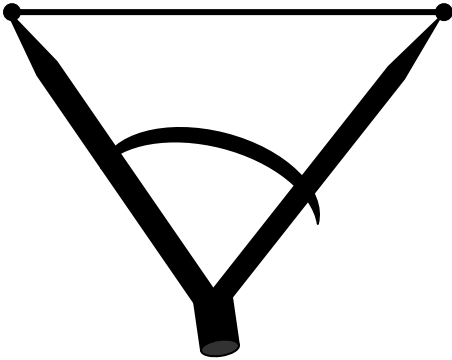
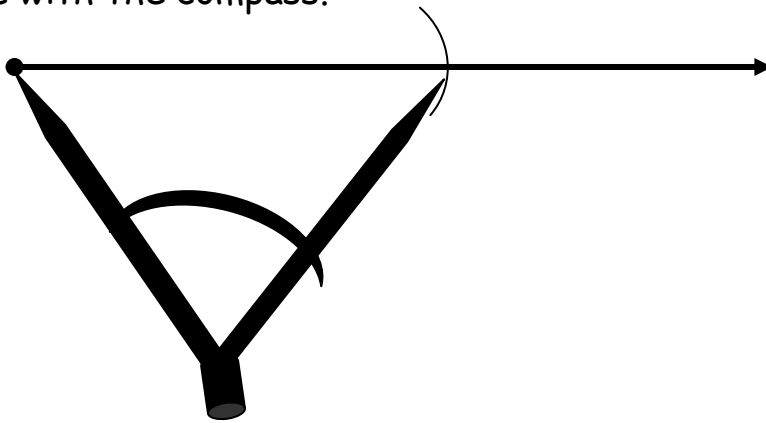


Copy a line segment

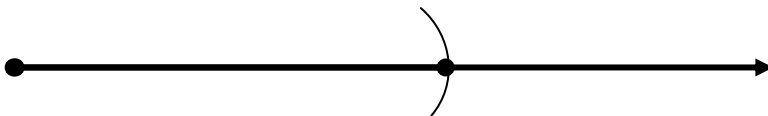
1st Measure the length of the given line segment with your compass.



2nd Copy the length of the given line segment onto a working ray by swinging the same arc with the compass.

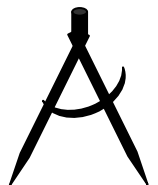


3rd Place an endpoint to mark the end of the segment/



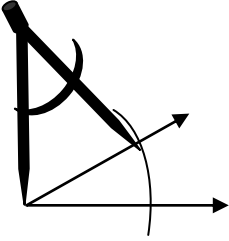
You try.

Copy this segment.

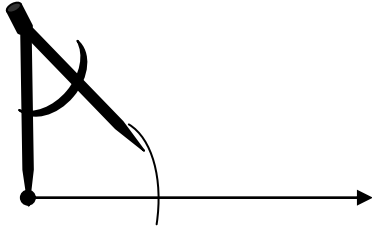


Copy an angle

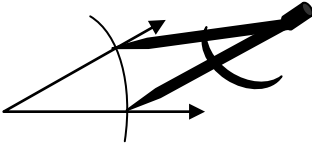
- 1st Swing an arc cutting both sides of the angle.



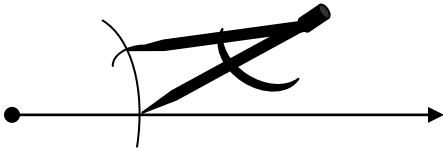
- 2nd Swing the same arc from the endpoint of a working ray.



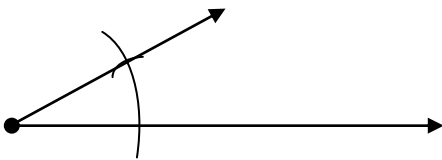
- 3rd Measure the span of the original arc on the given angle.



- 4th Measure and mark that same span on the working ray and working arc.

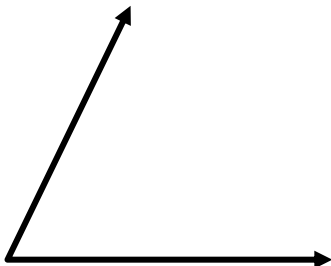


- 5th Draw the ray for the other side through the intersecting arcs.



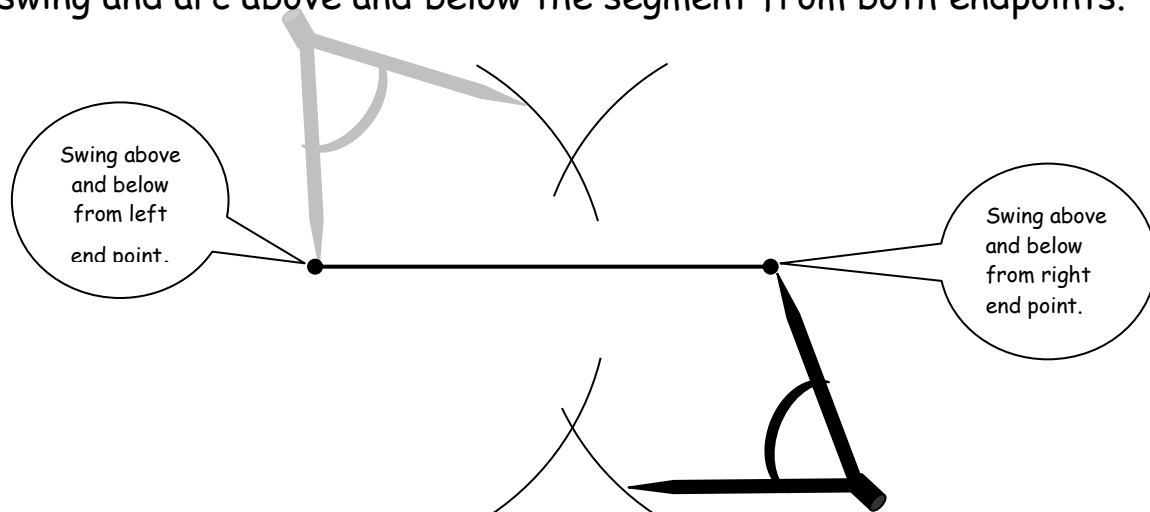
You try!

Copy the angle below.

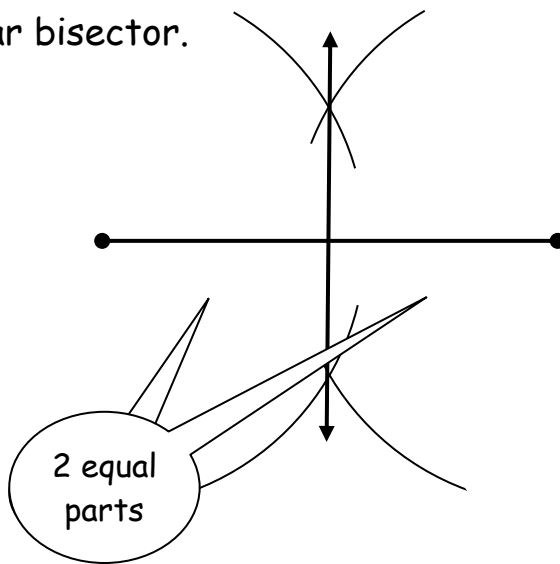


Bisect a segment

- 1st** Set your compass at a width that is more than half the length of the segment and swing an arc above and below the segment from both endpoints.



- 2nd** Connect the intersections of the arcs. That segment is the bisector, in fact, it is a perpendicular bisector.



You try!

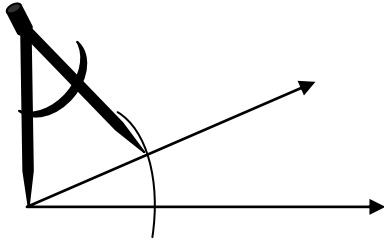
Bisect the segment below.



Bisect an angle

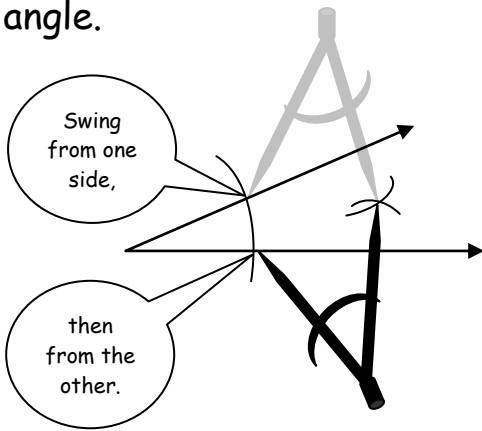
1st

Swing an arc that cuts both sides of the angle.



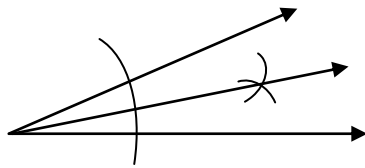
2nd

Swing an arc from each side where the original arc intersects the sides of the angle. Make sure your compass is set at a radius that is more than half the span of the angle.



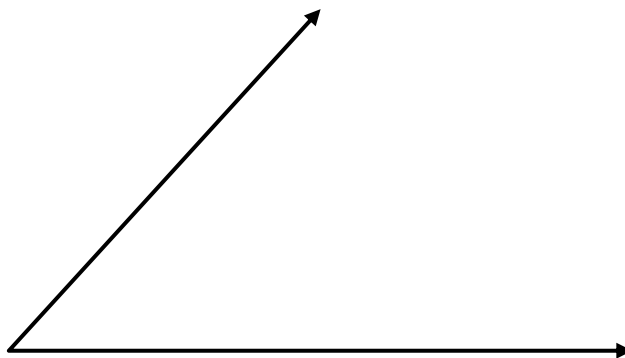
3rd

Draw a ray from the vertex through the intersecting arcs. This is the angle bisector.



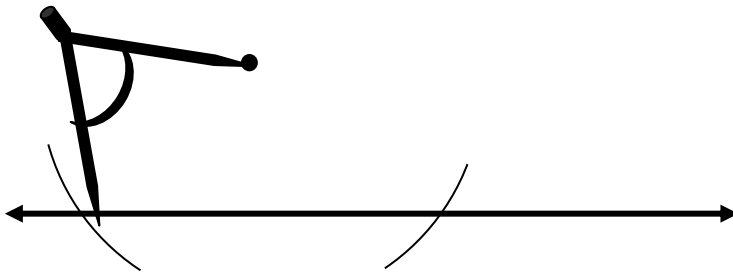
Try one!

Bisect the angle at the right.

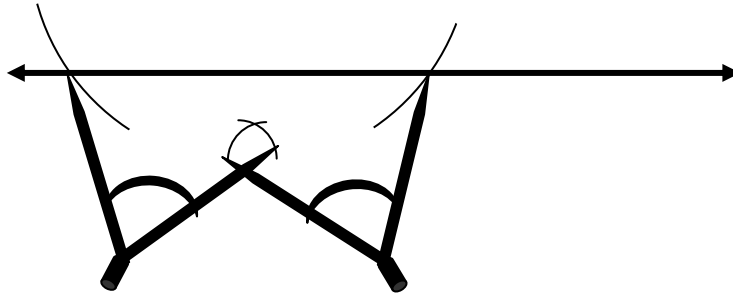


Draw a line perpendicular to a given line from a given point

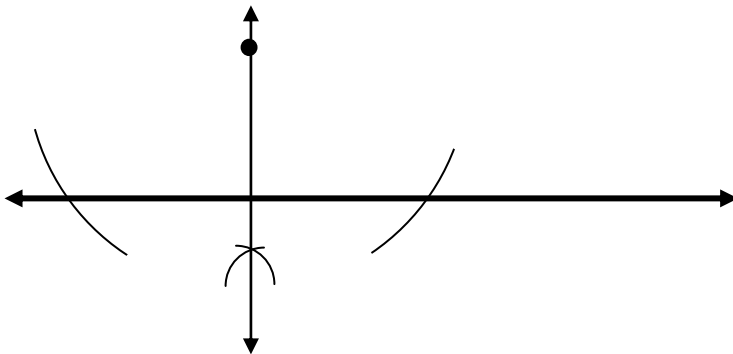
1st Swing an arc from the given point that cuts the given line in two places. This means your compass must have a radius that is greater than the distance from the point to the line.



2nd Swing arcs below the line from each of the places where the arc intersects the line.



3rd Draw a line connecting the point to the intersecting arcs. This line is perpendicular to the given line.



You try!

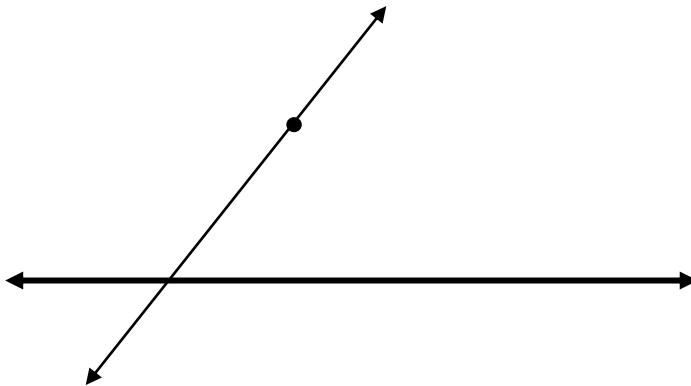
Draw a line through the given point perpendicular to the given line.



How do you draw a line parallel to a given line through a given point?

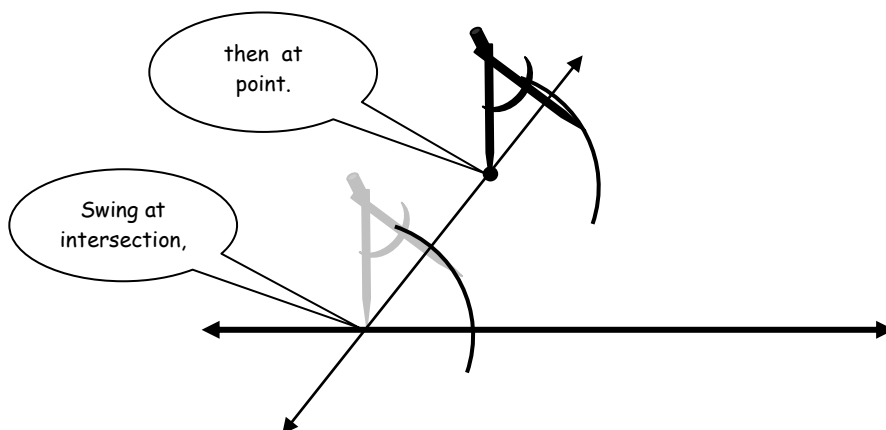
1st

Draw a line through the given point that will intersect the given line.



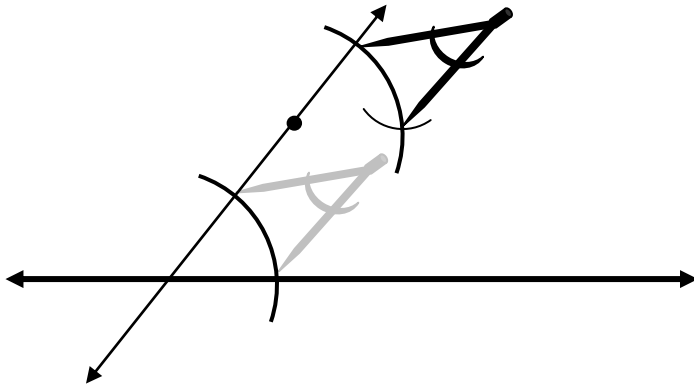
2nd

Swing an arc from the intersection of the two lines that will cut both lines, and the swing that same arc using the point as the center.

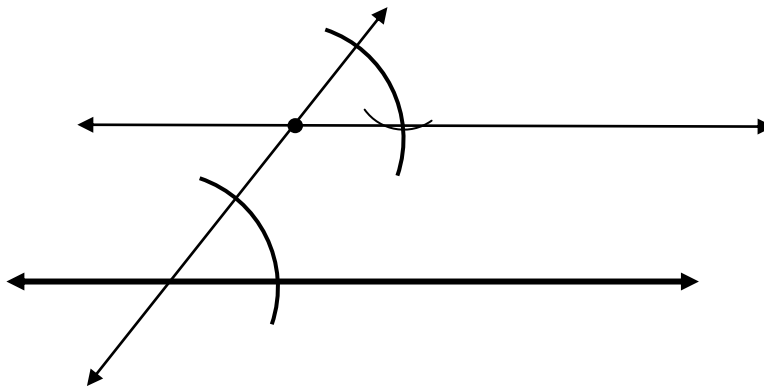


3rd

Measure angle span at the intersection and copy that span at the point. You are really copying the angle so its vertex is at the point.



4th Draw a line through the point and the intersecting arcs. This line is parallel to the given line.



You try!

Draw a line through the given point parallel to the given line.

