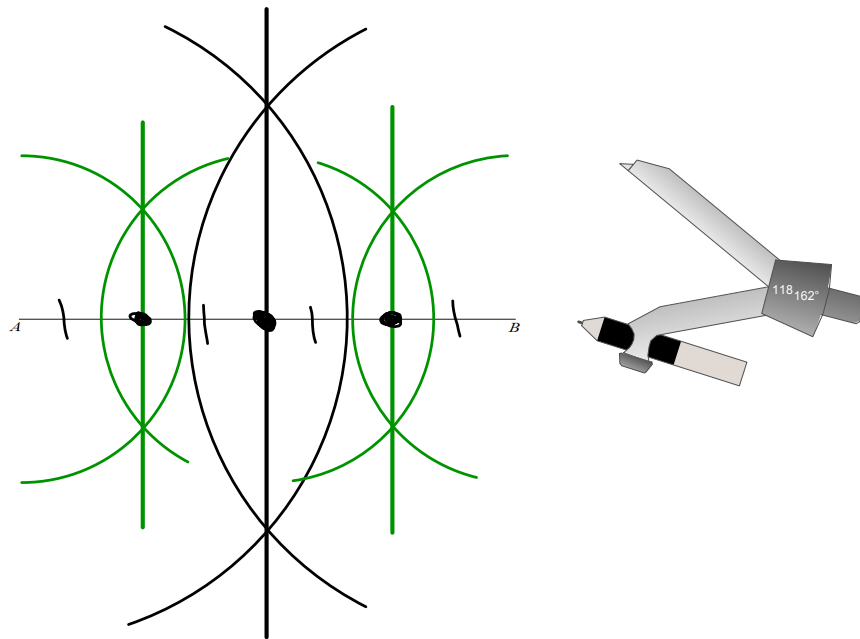


DO NOW

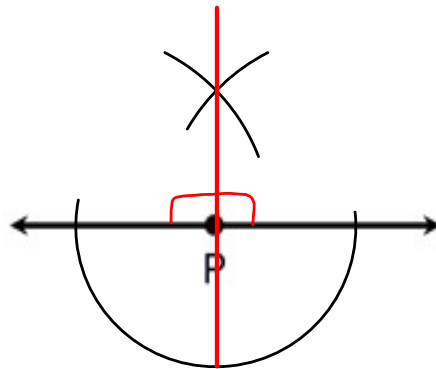
Divide the segment AB into four congruent segments



Sep 25-9:57 AM

Perpendicular from a point ON a line

1. Place your compass point on P and swing an arc of any size below the line that crosses the line twice. You will be drawing at least a semicircle
2. Stretch the compass LARGER!
3. Place the compass point where the arc crossed the line on one side and make a small arc above or below the line
4. Without changing the span on the compass, place the compass point where the first arc crossed the line on the OTHER side and make another arc. Your two small arcs should be intersecting.
5. Using a straightedge, connect the intersection of the two small arcs to point P .

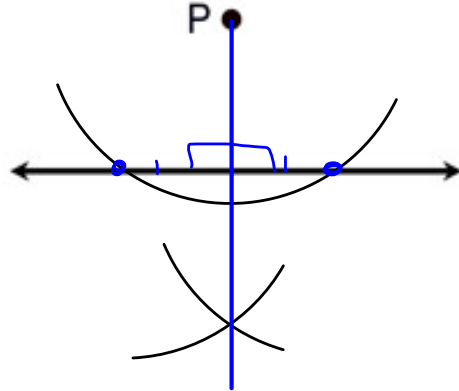


This construction is actually another version of the construction of **BISECT AN ANGLE**. This construction bisected the straight angle P .

Sep 26-9:42 AM

Perpendicular from a point OFF a line

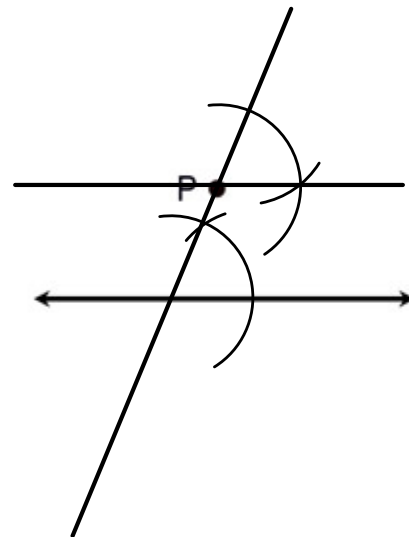
1. Place your compass point on P and swing an arc of any size that crosses the line twice.
2. Place the compass point on one of the two locations where the arc crossed the line and make a small arc below the line (on the side where P is not located).
3. Without changing the span on the compass, place the compass point on the other location where the first arc crossed the line and make another small arc below the line. The two small arcs should be intersecting (on the side of the line opposite of point P).
4. Using a straightedge, connect the intersection of the two small arcs to point P .



Sep 26-9:44 AM

Parallel - through a point (option 1)

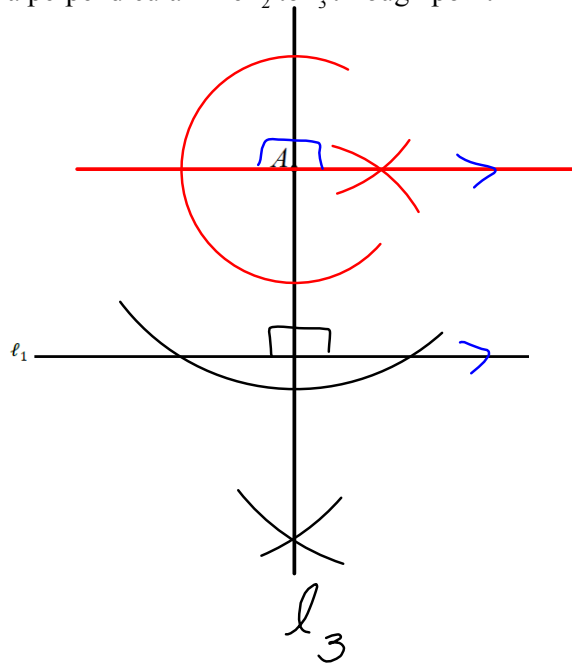
1. Using your straightedge, draw a transversal through point P . This is simply a straight line which passes through P and intersects with given line. Drawing the line slanted will make the construction easier than if you draw the line vertical. Be sure to draw the line well above P .
2. Using the construction COPY AN ANGLE, construct a copy of the angle formed by the transversal and the given line such that the copy will be located UP at point P . The vertex of the copied angle will be point P .
3. When you draw the line to complete the angle copy, you will be drawing a line parallel to the given line.



Sep 26-9:56 AM

Parallel - through a point (option 2)

1. Construct a perpendicular line ℓ_3 to a line ℓ_1 from point A not on ℓ_1
2. Construct a perpendicular line ℓ_2 to ℓ_3 through point A



Sep 26-9:57 AM