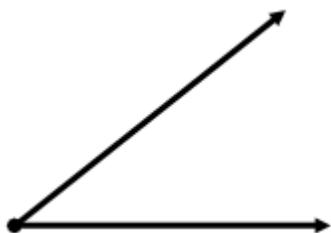


## Geometry CC 1.9 Copying an angle and constructing parallel lines.

Opening Exercise: Copy the angle below.

1. Draw a ray.
2. Draw an arc that intersects both rays of the angle you wish to copy.
3. Using the same compass setting, draw an arc that intersects the ray draw in step 1.
4. Measure the distance between the points of intersection (step 2) and transfer it to the angle you are constructing.
5. Draw a ray from the endpoint of the ray (step 1) through the point where the two arcs (step 3 and 4) intersect.



Construct a line parallel to line  $t$  and passing through point  $P$

- 1: Draw a line passing through point  $P$  and intersecting line  $t$  (*this line is the transversal*)
- 2: Using  $P$  as the vertex, copy the angle formed by the transversal (drawn in step 1) and line  $t$

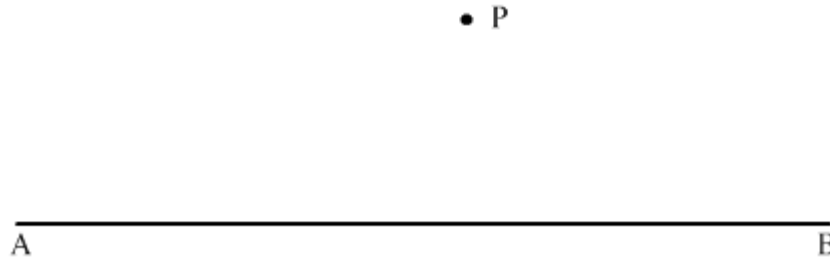
$P \bullet$



**An alternative method for constructing parallel lines.**

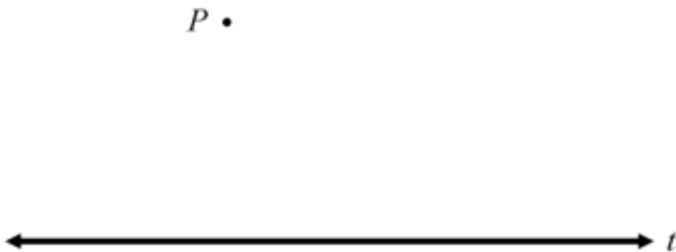
To construct a line parallel to  $\overline{AB}$  and passing through point  $P$

- 1: Construct a line perpendicular to  $\overline{AB}$  and passing through point  $P$  and label it  $t$ .
- 2: Construct a line perpendicular to line segment  $t$  (the line constructed in step 1) and passing through point  $P$ .  
This line will be parallel to  $\overline{AB}$

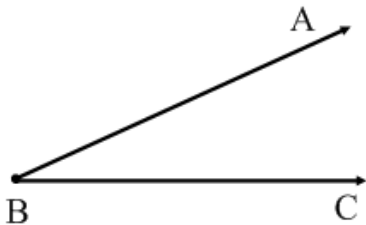


**Homework**

1. Construct a line parallel to line  $t$  and passing through point  $P$ .



2. Copy angle  $ABC$ .



3. On a blank sheet of paper, draw an obtuse angle (greater than 90 degrees) and copy it.