Definitions:

- **circumscribed circle**: contains the vertices of the triangle as points on the circle.
- **circumcenter of \( \triangle ABC \)**: is the center of the circumscribed circle.
  
  * If \( P \) is the circumcenter, then \( PA = PB = PC \).
  
  * The circumcenter of a triangle must be a point on each of the perpendicular bisector of the sides.
  
  * Therefore, to find the circumcenter of a triangle, we find the perpendicular bisector of the sides of the triangle.

**CONSTRUCTION 8**: Construct the circumscribed circle of a triangle.

1. Given \( \triangle ABC \) construct line \( m \) which is the perpendicular bisector of side \( \overline{AC} \).
2. Next, construct line $n$ which is the perpendicular bisector of side $AB$.

3. The intersection of lines $m$ and $n$ is the circumcenter of $\triangle ABC$, which we will label $P$.

4. The radius of the circumscribed circle is $PA$ (or $PB$ or $PC$).