Math 121B
Geometry Definitions

(1) perpendicular bisector (of a line segment):
   (a) first definition: the line through the midpoint of the segment which is perpendicular to the segment
   (b) second definition: the set of points which are equidistant from the endpoints of the segment

   Exercise: Prove that the two definitions are equivalent!

(2) angle bisector:
   (a) first definition: the line (or ray) through the vertex of the angle which divides the angle into two congruent angles
   (b) second definition: the set of points which are equidistant from the sides of the angle

   Exercise: Prove that the two definitions are equivalent!

(3) Let $O$ be a point in the plane and let $r$ be a positive number. The circle with center $O$ and radius $r$ is the set of points in the plane whose distance from $O$ is $r$.

(4) A chord of a circle is a line segment whose endpoints are on the circle.

(5) A diameter of a circle is a chord of the circle which contains the center of the circle.

(6) A radius of a circle is a segment from the center of the circle to any point on the circle.

(7) The tangent line to a given circle at a point $P$ on the circle is the line through $P$ which is perpendicular to the radius to $P$. 