# Definitions and Postulates

Objectives

1. Use symbols for lines, segments, rays, and distances; find distances.
2. Name angles and find their measures.
3. State and use the Segment Addition Postulate and the Angle Addition Postulate.
4. Recognize what you can conclude from a diagram.
5. Use postulates and theorems relating points, lines, and planes.

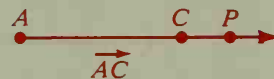## 1-3 *Segments, Rays, and Distance*

In the diagram, point B is *between* points A and C. Note that B must lie on $\overleftrightarrow{AC}$.

Segment AC, denoted $\overline{AC}$, consists of points A and C and all points that are between A and C. Points A and C are called the *endpoints* of $\overline{AC}$.
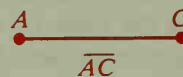
Ray AC, denoted $\overrightarrow{AC}$, consists of $\overline{AC}$ and all other points P such that C is between A and P. The *endpoint* of $\overrightarrow{AC}$ is A, the point named first.

$\overrightarrow{SR}$ and $\overrightarrow{ST}$ are called **opposite rays** if S is between R and T.
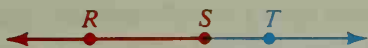
The hands of the clock shown suggest opposite rays.

On a *number line* every point is paired with a number and every number is paired with a point. In the diagram, point J is paired with -3, the *coordinate* of J.

The **length** of $\overline{MJ}$, denoted by MJ, is the distance between point M and point J. You can find the length of a segment on a number line by subtracting the coordinates of its endpoints:

$$MJ = 4 - (-3) = 7$$