# Notes 6.2 Segment addition postulate

POSTULATE 1 *Ruler Postulate*

The points on a line can be matched one to one with the real numbers. The real number that corresponds to a point is the **coordinate** of the point.

names of points

A B

x_1 x_2

coordinates of points

The **distance** between points A and B, written as AB, is the absolute value of the difference between the coordinates of A and B.
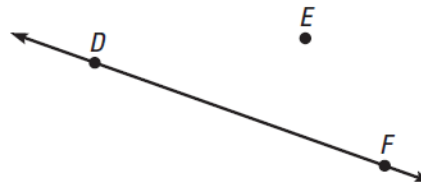
A AB B

x_1 x_2

$$AB = |x_2 - x_1|$$

AB is also called the **length** of $\overline{AB}$.
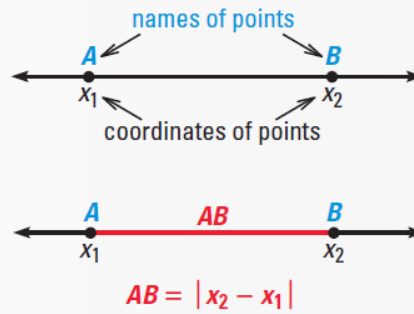
When three points lie on a line, you can say that one of them is **between** the other two. This concept applies to collinear points only. For instance, in the figures below, point B is between points A and C, but point E is not between points D and F.
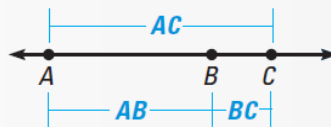
Point *B* is between points *A* and *C*.   Point *E* is not between points *D* and *F*.
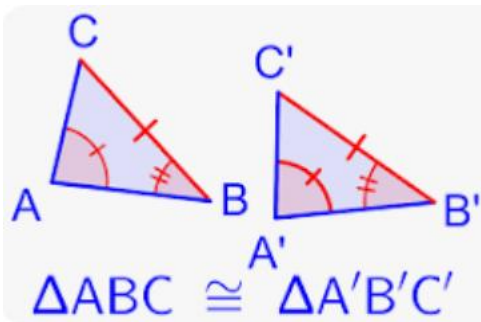

POSTULATE 2 *Segment Addition Postulate*

If B is between A and C, then $AB + BC = AC$.

If $AB + BC = AC$, then B is between A and C.

AC

A B C

AB BC

Congruent:

Two geometric figures are said to be congruent, or to be in the relation of congruence, **if it is possible to superpose one of them on the other so that they coincide throughout**.

$\triangle ABC \cong \triangle A'B'C'$

The symbol for congruent is: $\cong$