

Day 3

1.5 Measuring Segments

1: Finding Segment Lengths



$$\text{Length of } \overline{AB} = |a - b|$$

coordinates



$$m\overline{AB} = 5$$

"measure of"

$$\overline{CD} \cong \overline{EF}$$

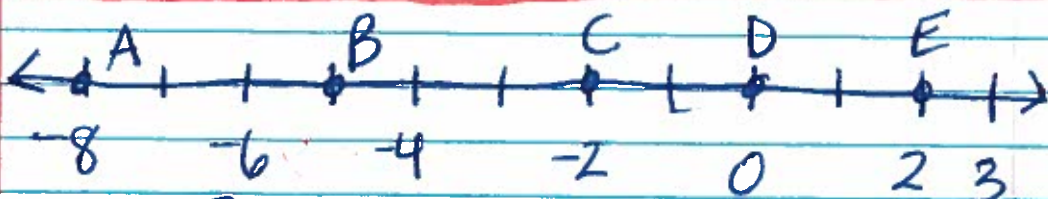


congruent (have the same measure)

$$CD = EF$$

or

$$mCD = mEF$$



$$AB = 3$$

$$BC = 3$$

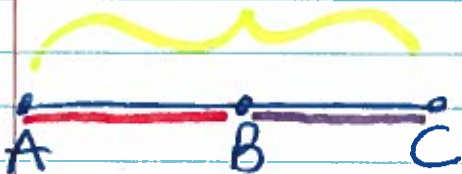
$$EB = 7$$

$$AC = 6$$

$$CD = 2$$

$$AE = 10$$

Segment Addition Postulate



$$AC = AB + BC$$

(ex)



$$EG = 100$$

$$EF + FG = EG$$

$$4x-20 + 2x+30 = 100$$

$$6x - 20 + 30 = 100$$

$$6x + 10 = 100$$

$$6x = 90$$

$$x = 15$$

$$4(15) - 20$$

$$EF = 40$$

$$FG = 60$$

Midpoint of a segment is a point that divides the segment into 2 \cong segments.



$\overline{AB} \cong \overline{BC}$, then B is the midpoint.

$$AC = CB \leftarrow \text{tells you this}$$

(ex)



C is the midpoint.

Find

$$AC = 11$$

$$CB = 11$$

$$AB = 22$$

$$\begin{array}{r} 2x+1 = 3x-4 \\ -2x \quad -2x \\ \hline 1 = 1x-4 \\ +4 \quad +4 \\ \hline 5 = x \end{array}$$