

11-2 Linear Measure

line segment = or segment = a measurable part of a line that has two points called endpoints, consists of all points in between.



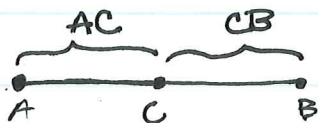
Segment \overline{AB}
 \overline{AB} or \overline{BA}

The measure of \overline{AB} is written as AB .



the real numbers that represent a quantity (e.g. length)

between = for any points A and B on a line, there is another point C between A and B if and only if A, B, and C are collinear and $AC + CB = AB$.

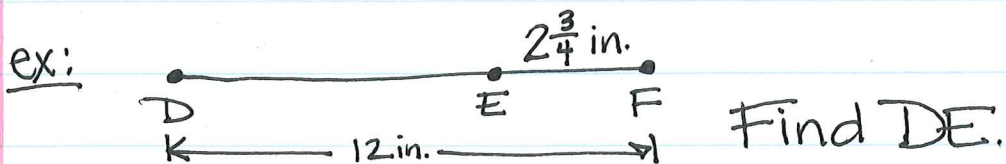


ex: Find AB .

$$AC + CB = AB.$$

$$3.3 + 3.3 = AB$$

$$AB = 6.6 \text{ inches}$$



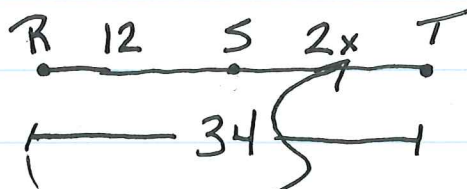
$$DE + EF = DF$$

$$DE + 2\frac{3}{4} = 12$$

$$-2\frac{3}{4} \quad -2\frac{3}{4}$$

$$DE = 9\frac{1}{4} \text{ inches}$$

ex: Find the value of x and ST if S is between R and T . $RS = 12$, $ST = 2x$, $RT = 34$.



$$RS + ST = RT$$

$$\cancel{12} + 2x = \cancel{34}$$

$$-12 \quad -12$$

$$\boxed{x = 11}$$

$$\frac{2x = 22}{2} \quad \frac{22}{2}$$

$$ST = 2(11)$$

$$\boxed{ST = 22}$$

congruent = when segments have the same measure.

\cong means "is congruent to"



$$\overline{XY} \cong \overline{PQ}$$