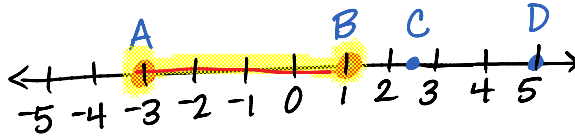


1.2 Notes

Warm-Up: Use the numberline to find the distance between the following points:

- ① B and D 4
- ② C and B 1.5 or ~~1.5~~
- ③ A and B 4
- ④ B and A 4



Note: • Be able to explain how you find your answer.
 • Try to come up w/ an algebraic way to find the same answer.

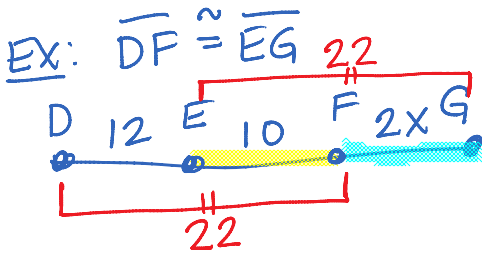
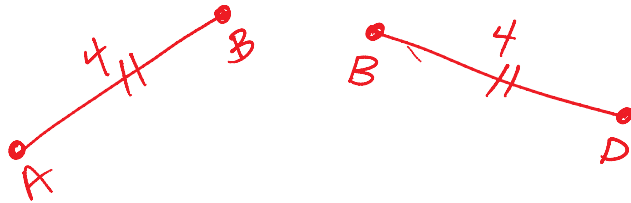
Absolute Value: distance away from zero

EX: $BA = |1 + (+3)|$
 $= |4|$
 $= 4$

$BA = \overset{\text{length}}{\text{distance}}$ between B and A
 $\overline{BA} = \text{line segment BA}$

A. Congruent Segments: segments that have the same size

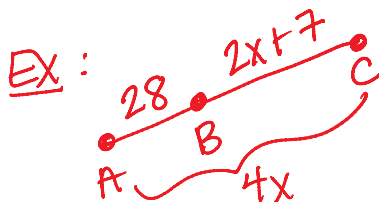
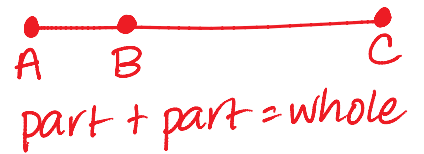
$\overline{AB} \cong \overline{BD}$
 congruent



$10 + 2x = 22$
 $x = 6$
 $FG = 12$

Find FG

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



$AB + BC = AC$
 $28 + 2x + 7 = 4x$
 $35 + 2x = 4x$
 $35 = 2x$



Find AC.

$$35 + 2x = 4x$$

$$35 = 2x$$

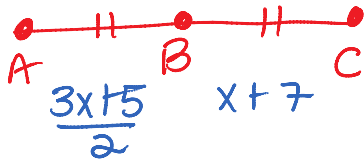
$$\frac{35}{2} = x$$

$$AC = 2 \left(\frac{35}{2} \right)$$

$$\boxed{AC = 70}$$

c) Midpoint: A point that \div a segment into 2 \cong segments.

Ex: B is midpt of AC



Find BC.

$$2 \left(\frac{3x+5}{2} \right) = (x+7) 2$$

$$3x+5 = 2x+14$$

$$x=9$$