Example Problems

Segment Addition Postulate

Example 1

- Decide whether the following names a line, segment, ray, or length

1) $\overline{BC}$ 2) $\overrightarrow{BC}$ 3) BC 4) $\overleftrightarrow{BC}$

Segment ray length line

- ❑ How many endpoints does a segment have? 2
  - ❑ A ray? 1
  - ❑ A line? 0

Example 2

- Answer the following with yes or no

1) Is $\overline{XY}$ the same as $\overline{YX}$ yes

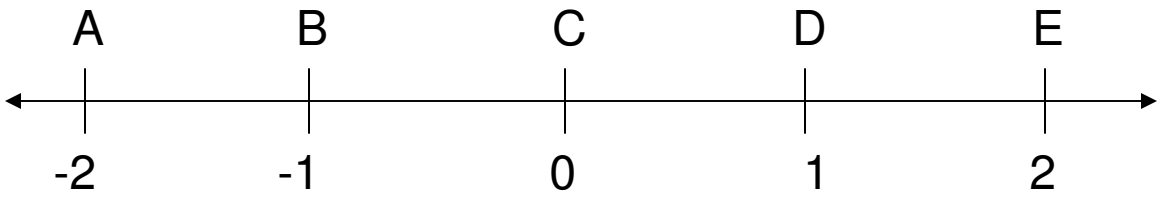
2) Is $\overleftrightarrow{XY}$ the same as $\overleftrightarrow{YX}$ yes

3) Is $\overrightarrow{XY}$ the same as $\overrightarrow{YX}$ no

4) Is XY the same as YX yes

Example 3

- Use the given line to answer the following



1) What is the coordinate of D? 1

2) Name the point with the coordinate -2. A

3) Find each distance

a) AB 1 b) BD 2 c) EA 4

4) Name two segments congruent to $\overline{CE}$ $\overline{AC}$, $\overline{BD}$

5) Name the ray opposite to $\overrightarrow{BA}$. $\overrightarrow{BC}$

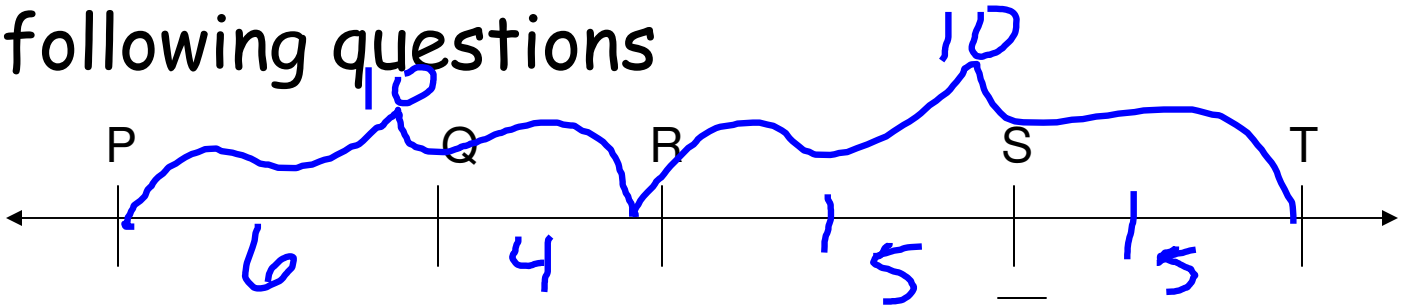
Example 5

- The given numbers are the coordinates of two points on a number line. State the distance between the points.

1) -2 and 7 9
2) -3 and -8 5
3) 8 and 10 2
4) -12 and 14 26

Example 6

- Use the given diagram to answer the following questions



In the diagram PR = RT, S is the midpoint of $\overline{RT}$, QR = 4, and ST = 5

a) RS = 5

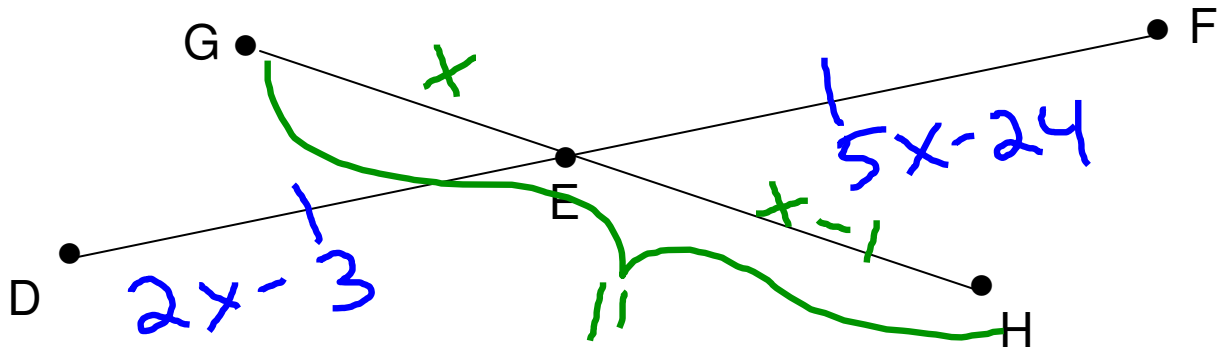
b) RT = 10

c) PR = 10

d) PQ = 6

Example 7

- Use the given diagram to solve



If E is the midpoint of segment DF. Find the value of x.

1) DE = 2x – 3, EF = 5x – 24

$2x - 3 = 5x - 24$

$x = 7$

2) GE = x, EH = x – 1, GH = 11

$x + x - 1 = 11$

$x = 6$