

Welcome to Class!!

You will need:

- ~ Pencil
- ~ Binder
- ~ Vocabulary Sheet
- ~ Pink sheet from yesterday
- ~ Yellow 1.3 Notes packet from yesterday

Homework:

Handout 1.3

(you got this yesterday)

Stick Quiz - August 28, 2018

1) Use the diagram to answer the following questions.

a) How many points appear in the figure? 9

b) How many lines appear in the figure? 3

c) How many planes appear in the figure? 2

d) Name three collinear points. M, N, O

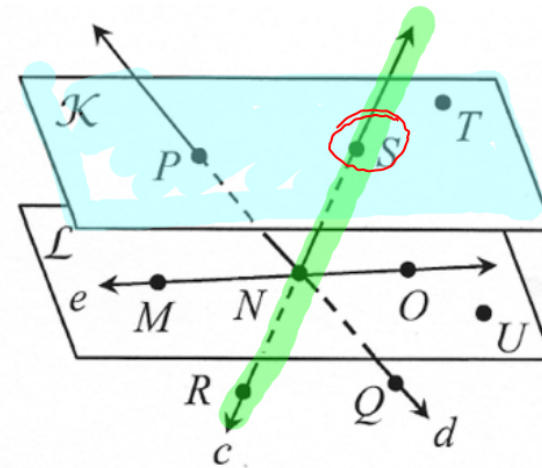
e) Name four non-coplanar points. M, R, S, Q

f) Give another name for line e . ~~MNO~~ ~~MO~~ MN

g) Name the intersection of \overleftrightarrow{PQ} and \overleftrightarrow{MO} . N

h) Name the intersection of plane K and line c . S

i) Give another name for \overleftrightarrow{PQ} . ~~MO~~ d



2) Use the diagram to answer the following questions.

a) How many points appear in the figure?

8

b) How many lines appear in the figure? 9

c) How many planes appear in the figure? 5

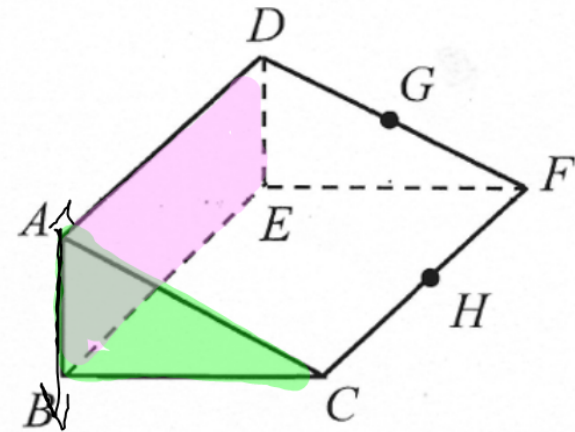
d) Name three collinear points. D, G, F

e) Name four coplanar points. A, D, G, & F

f) Name the intersection of planes ABC and ABE . \overleftrightarrow{AB}



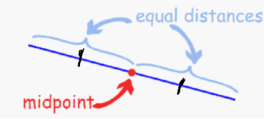
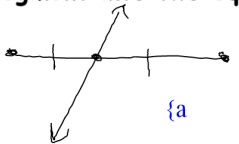
g) Name the intersection of planes BCH and DEF . \overleftrightarrow{EF}

h) Name the intersection of \overline{AD} and \overline{DF} . D

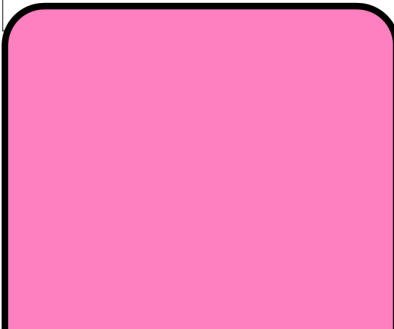


Unit 1.3: Measuring Segments

Vocabulary:

<p>Coordinate</p>	<p>Coordinates are a set of values that show an exact position.</p>
<p>Distance</p>	<p>Length. A measurement of how far through space.</p> 
<p>Congruent</p>	<p>Equal length or size.</p> <p>Symbols: $\overline{AB} \cong \overline{CD}$</p> 
<p>Midpoint</p>	<p>The middle of ^{a line}. The point halfway along.</p> 
<p>Segment Bisector</p>	<p>The line that divides a segment into two equal parts.</p> 

• has to be positive!
 distance = $|a-b|$ or $|b-a|$

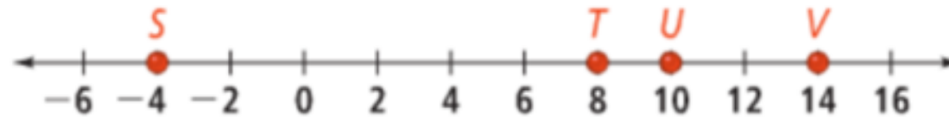


On **separate sheet** - When complete put after page with stick quiz

Unit 1.3: Measuring Segments NOTES

Example #1 - Measuring Line Segments:

What is ST ? (NOTE: ST represents the length of \overline{ST} . It also represents the distance between S and T.)



$$ST = |S - T|$$

$$= |-4 - 8|$$

$$= |-12|$$

$$\boxed{ST = 12}$$

$$ST = |T - S|$$

$$= |8 - (-4)|$$

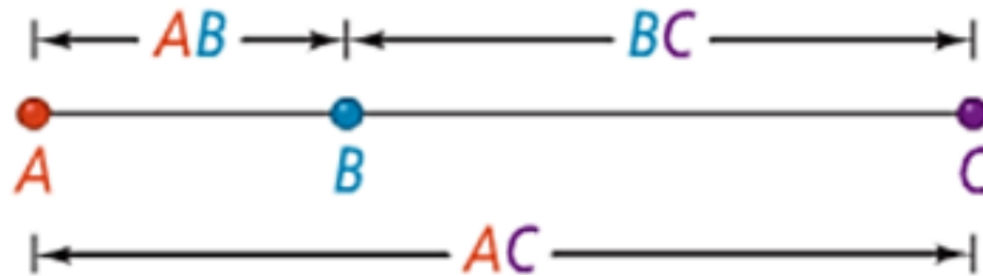
$$= |12|$$

$$\boxed{ST = 12}$$

Postulate 1-6: Segment Addition Postulate

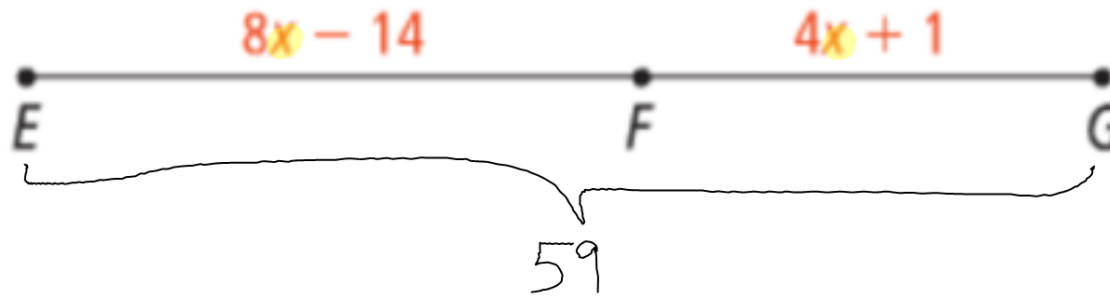
If three points A, B, and C are collinear and B is between A and C, then

$$\underline{AB} + \underline{BC} = \underline{AC}$$



Example #2: Using the Segment Addition Postulate

If $EG = 59$, what are EF and FG ?



$$\underline{8x - 14} + \underline{4x + 1} = 59 \quad \left. \begin{array}{l} EF = 8(6) - 14 \\ = 48 - 14 \end{array} \right\}$$

$$\begin{array}{r} 2x - 13 = 59 \\ +13 \quad +13 \\ \hline 2x = 72 \\ \frac{2x}{2} = \frac{72}{2} \\ x = 6 \end{array}$$

$$\boxed{EF = 34}$$

$$\begin{array}{l} FG = 4(6) + 1 \\ = 24 + 1 \end{array}$$

$$\boxed{FG = 25}$$

Example #3: Using the Segment Addition Postulate



If $JL = 120$, what are JK and KL ?



$$4x + 6 + 7x + 15 = 120$$

$$11x + 21 = 120$$

$$\begin{array}{r} -21 \\ -21 \end{array}$$

$$\frac{11x = 99}{\quad \quad \quad}$$

$$x = 9$$

$$120 \quad JK = 4(9) + 6$$

$$= 36 + 6$$

$$\boxed{JK = 42}$$

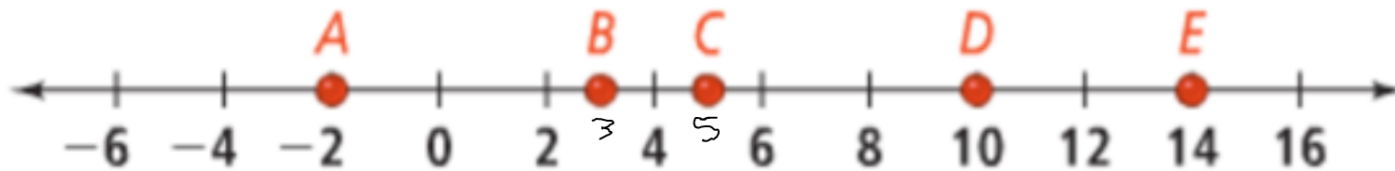
$$KL = 7(9) + 15$$

$$= 63 + 15$$

$$\boxed{KL = 78}$$

Example #4: Comparing Segment Lengths

Are \overline{AC} and \overline{BD} congruent?

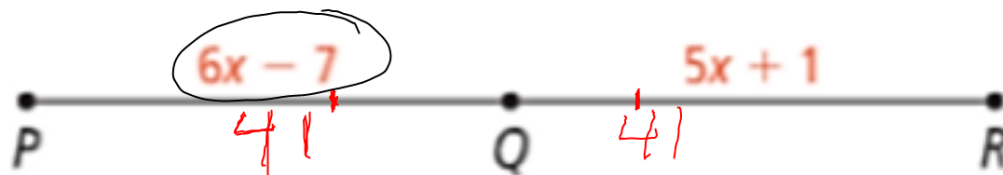


$$\begin{aligned} AC &= |-2 - 5| & BD &= |3 - 10| \\ &= |-7| & &= |-7| \\ AC &= 7 & BD &= 7 \end{aligned}$$

Yes, $AC \cong BD$.

Example #5: Using the Midpoint

Q is the midpoint of \overline{PR} . What are PQ , QR , and PR ?



$$\begin{aligned} 6x - 7 &= 5x + 1 \\ -5x &\quad -5x \\ \hline x - 7 &= 1 \\ +7 &\quad +7 \\ \hline x &= 8 \end{aligned}$$

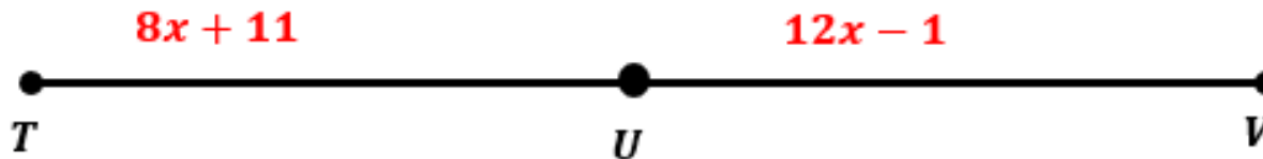
$$\begin{aligned} PQ &= 6(8) - 7 \\ &= 48 - 7 \\ \boxed{PQ} &= \boxed{41} \\ QR &= 5(8) + 1 \\ &= 40 + 1 \\ \boxed{QR} &= \boxed{41} \end{aligned}$$

$$\begin{aligned} PR &= PQ + QR \\ &= 41 + 41 \\ \boxed{PR} &= \boxed{82} \end{aligned}$$

Example #6: Using the Midpoint



U is the midpoint of \overline{TV} . What are TU , UV , and TV ?



$$x = 3 \quad TU = 35 \quad UV = 35 \quad TV = 70$$

Now what?

Work on:

- Handout 1.3

Must be completed by:

- Wednesday 8/29

If you finish early:

See me

I can:

- 1) Find and compare lengths of segments