Review 1-1/1-3

1. The notation for the length of the segment between A and B is ___A___.

   length

   a. AB b. $\overleftrightarrow{AB}$ c. $\overline{AB}$ d. $\overrightarrow{AB}$

   distance   line   segment   ray

2. C, D, and E are collinear. C is between D and E. DC = 3v - 30, CE = 6v - 15, and DE = 27.

   a.) Solve for v.   a.) _____8_____

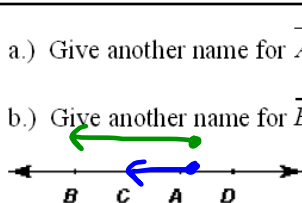   b.) Determine the length of $\overline{CE}$.   b.) _____33_____

   $$3V-30 \;+\; 6V-15$$

   D ———— C ———— E

   ———— 27 ————

   b) CE = 6V - 15
      = 6(8) - 15
      = 48 - 15
   CE = 33

   $$3V-30 + 6V-15 = 27$$
   $$9V - 45 = 27$$
   $$+45 \quad +45$$
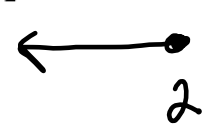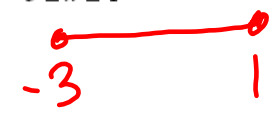 $$\frac{9V}{9} = \frac{72}{9}$$
   $$V = 8$$

3. a.) Give another name for $\overrightarrow{AC}$. _____$\overrightarrow{AB}$_____

   b.) Give another name for $\overline{BD}$. _____$\overline{DB}$_____

   B   C   A   D

4. Graph the inequality on a number line **and** then describe what geometric figure was graphed.

   a.) $x \leq 2$ b.) $-3 \leq x \leq 1$

                    2   -3   1

   _____RAY_____   _____SEGMENT_____

5. Name the three geometric undefined terms given in this textbook.

   _____POINT   LINE   PLANE_____

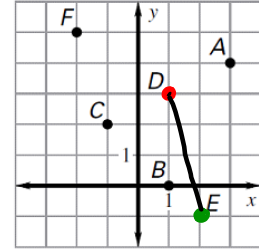6. Find the midpoint of the segment with endpoints (–9, 6) and (8, –7). _____

$$M = \left(\frac{-9+8}{2}, \frac{6+-7}{2} \right)$$ $x_1 \ y_1 \ x_2 \ y_2$ $$M = \left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2} \right)$$

$$= \left(\frac{-1}{2}, \frac{-1}{2} \right)$$

7. Find the distance between points D and E. _____

$$D(1,3) \qquad E(2,-1)$$
$$x_1 \ y_1 \qquad x_2 \ y_2$$

$$d = \sqrt{(2-1)^2 + (-1-3)^2}$$

$$= \sqrt{(1)^2 + (-4)^2} \qquad d = \sqrt{(x_2-x_1)^2 + (y_2-y_1)^2}$$

$$= \sqrt{1 + 16}$$

$$= \sqrt{17} \approx 4.12$$

8. If $AB = 12$ and $AC = 29$, find the length of $\overline{BC}$. 17 _____

12 — ? — (diagram of line with points A, B, C; 29 below)
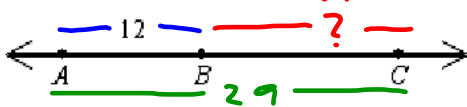
$$\begin{array}{r} 29 \\ -12 \\ \hline 17 \end{array}$$

$$12 + x = 29$$
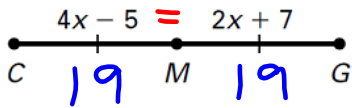$$ -12 \quad -12$$
$$x = 17$$

9. a.) Name the intersection of plane EFQ and plane FGS. $\overleftrightarrow{FQ}$ _____

b.) Are the points coplanar? FGSQ __Y__   EHPQ __N__   EHQS __N__

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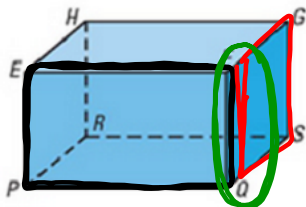
10. M is the midpoint of the segment. Find the length of CG. _____

$$4x - 5 = 2x + 7$$

$$\begin{array}{c c c c c} \bullet & & \bullet & & \bullet \\ C & 19 & M & 19 & G \end{array}$$

$$CG = 19 + 19$$
$$= 38$$

$$4x - 5 = 2x + 7$$
$$\underline{-2x \qquad -2x}$$
$$2x - 5 = 7$$
$$\underline{+5 \quad +5}$$
$$\frac{2x}{2} = \frac{12}{2}$$
$$\boxed{x = 6}$$

$$CM = 4x - 5$$
$$= 4(6) - 5$$
$$= 24 - 5$$
$$= 19$$

$$MG = 2x + 7$$
$$= 2(6) + 7$$
$$= 12 + 7$$
$$= 19$$

Aug 28-7:12 AM

Sep 3-7:24 AM

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