Geometry
Unit 1 Geometry Essentials
1.2 Day 3 Determine Length, Midpoint, and Ratios of Segments

Mathematician: _____
Period:_____

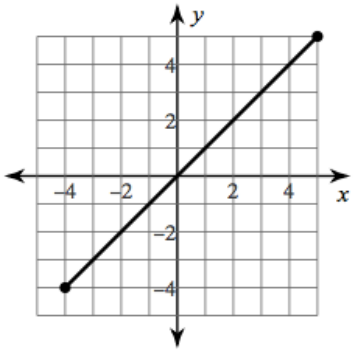
LEVEL: EMERGING

Directions: Find the length of the following line segments.

1) $(-3,-1)$ *and* $(-4,6)$

2) $(2.4,1.3)$ *and* $(-6.7,-6.6)$

3)

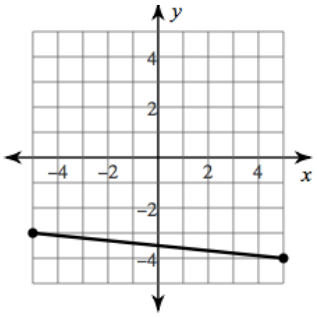


Directions: Find the midpoint of the following line segments.

4) $(2,10)$ *and* $(11,-3)$

5) $(2.8,.1)$ *and* $(-5.6,-6.3)$

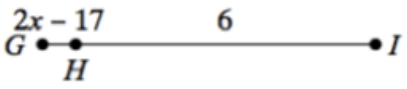
6)



LEVEL: PROFICIENT

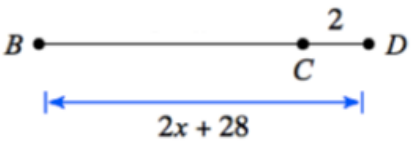
Directions: Use the given ratio to solve for the length of the indicated segment.

7) $\frac{m\overline{GH}}{m\overline{HI}} = \frac{2}{5}$



$m\overline{GH}$ = _____

8) $\frac{m\overline{BD}}{m\overline{CD}} = \frac{35}{2}$



$m\overline{BD}$ = _____

9) Point B lies on $\overline{AC}$. $= 127$. $\overline{AB}$ is represented by the expression $12x + 11$, and $\overline{BC}$ is represented by the expression $8x - 4$. What is the length of $\overline{AB}$?

10) Point C lies on $\overline{BD}$. $= 15$. $\overline{BC}$ is represented by the expression $2x - 5$, and $\overline{CD}$ is represented by the expression $3x$. What is the length of $\overline{BC}$?

LEVEL: MASTERY

Directions: Points A, B, and C are collinear and positioned in that order. Find the indicated length.

11) Find AB if $AC = 9x + 528$, $AB = 3x + 186$, and $BC = 66$.

12) Find BC if $BC = 12x + 653$, $AC = 80$, and $AB = 2x + 155$.

13) Find AC if $AB = 13x - 257$, $BC = 27$, and $AC = 15x - 284$.

14) Find the location of point H that divides the line segment GI into two parts with the ratio 2:5. The length of GI is 14.

$\overline{GH} =$ _____

15) Find the location of point C that divides the line segment BD into two parts with the ratio 9:2. The length of BD is 44.

$\overline{BC} =$ _____

LEVEL: HONORS

Directions:

Unit 1.2 Day 3 Worksheet Answers

1. 7.1
2. 12.1
3. 9.06
4. (6.5,3.5)
5. $(-1.4, -3.1)$
6. $(0, -3.5)$
7. $m\overline{GH} = 2.4$
8. $m\overline{BD} = 35$
9. $m\overline{AB} = 83$
10. $m\overline{BC} = 1.8$
11. 48
12. 29
13. 121
14. $m\overline{GH} = 4$
15. $m\overline{BC} = 36$