Geometry   Mathematician: _____
Unit 1 Geometry Essentials   Period:_____
1.2b Day 1: Midpoint and Distance Formula

LEVEL: EMERGING

1) State the distance formula:

   $d =$

2) State the midpoint formula.

   $midpoint = ($, $)$

Directions: Find the lengths of the following line segments with the given endpoints. Round your answers to 2 decimal places.

3) (-8,7) and (5,1)

4) (-11, 17) and (-6,5)

Directions: Find the midpoint between the given points.

5) (-8,5) and (2,7)

6) (6,-1) and (-3,-13)

LEVEL: PROFICIENT

Directions: Find the length and the midpoint of the segment below. Round your answers to 2 decimal places.

7)   a)
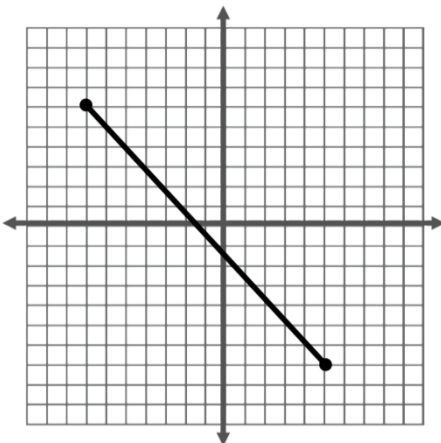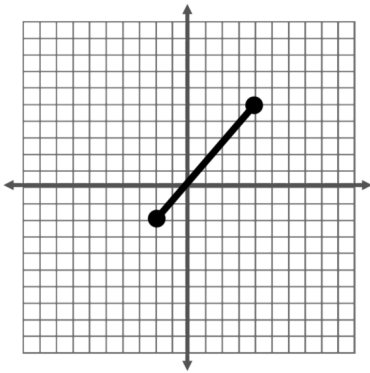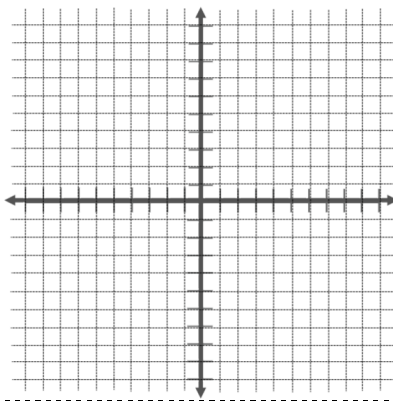   **Length**

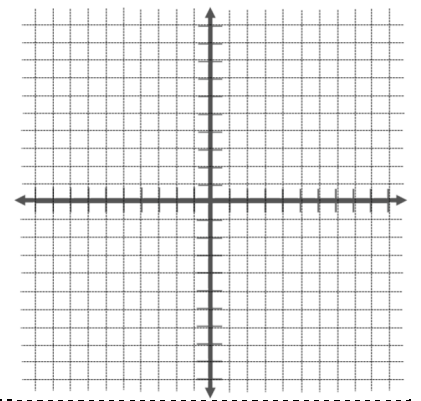b)
   Midpoint

8)

a)
Length

b)
Midpoint

LEVEL: MASTERY

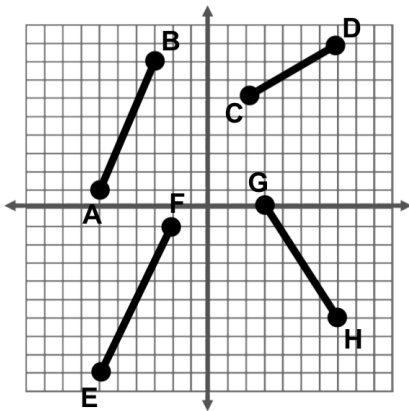9) Draw a line segment with a midpoint at (3,-2). Label your endpoints.

10) Draw a line segment parallel to the y-axis with a midpoint at (-2,-2).

Directions: Find the lengths of the following line segments. Justify by showing algebraic work! Round your answers to 2 decimal places.

11)

a) $\overline{AB} =$

b) $\overline{CD} =$

c) $\overline{EF} =$

d) $\overline{GH} =$

e) Which segment is the longest?

Directions:

Unit 1.2B Day 1 Worksheet Answers

1. $d = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$
2. $\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$
3. 14.32
4. 13
5. (-3,6)
6. (1.5, -7)
7.
   a. 17.69
   b. (-0.5,-1)
8.
   a. 9.22
   b. (1, 1.5)
9. Answers may vary
10. Answers may vary
11.
   a. $\overline{AB} = 7.62$
   b. $\overline{CD} = 5.83$
   c. $\overline{EF} = 8.94$
   d. $\overline{GH} = 7.21$
   e. $\overline{EF}$ is the longest