

## Partitioning a Segment & Midpoint

Name \_\_\_\_\_ Date \_\_\_\_\_

**Directions: Partition each segment by the given ratio.**

1) (1, 3) & (8, 4); 4:1      2) (-2, 1) & (4, 5); 3:7

3) (8, 0) & (3, -2); 1:4

4) (1.5, 6) & (1.5, -2); 3:5

5) (-14, 3) & (10, -4); 1:2

6) (4, 7) & (8, 7); 2:2

**Directions: Find the midpoint of each segment.**

7) A(3, 5) & B(-2, 6)

8) C(0, 4) & D(6, -2)

9) G(x, 3y) & H(3x, y)

**Directions: Find the missing endpoint if the midpoint is (3, 6).**

10) A(5, 11)

11) A (-8, 2)

12) A( $5x - 6$ ,  $-4y + 3$ )

## Review of Writing Equations of Lines

Name \_\_\_\_\_ Class Period \_\_\_\_\_

Write the equation of the line in slope-intercept form based on the given information.

1.  $m = \frac{2}{3}, (-3, 4)$

2.  $m = -3, b = 7$

3.  $(3, -2), (-4, -1)$

4. Parallel to  $y = 3x - 5$   
Passes through  $(5, 6)$

5.  $m = -\frac{1}{4}, (6, 0)$

6.  $m = \frac{3}{4}, y\text{-intercept} = -8$

7.  $m = \text{undefined}, (9, 13)$

8.  $\perp$  to  $2x + y = 3$   
passes through  $(4, -4)$

9.  $(14, -3), (-1, -3)$

10.  $m = 0, (6, 8)$

11. parallel to  $\frac{2}{3}x - \frac{1}{2}y = 2$   
passes through  $(-2, 5)$

12. Parallel to  $y = -3$   
passes through  $(-12, 10)$

13.  $m = -3/4$  (-2, 5)

14. (-2, 5), (8, 9)

15.  $\perp$  to  $x = 7$   
passes through (15, -1)

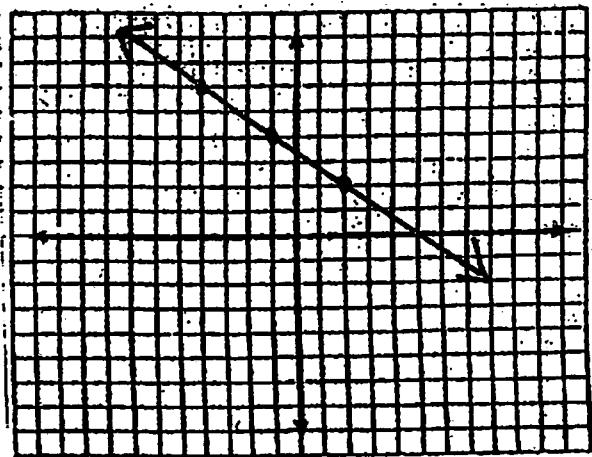
16. Parallel to  $x = 7$   
passes through (34, 18)

17. (-7, -4), (-7, 3)

18.  $\perp$  to  $3y - 2x + 15 = 0$   
passes through (5, -2)

In 19 - 20, use the given graphs to write an equation of the line in slope-intercept line.

19.



20.

