

Name \_\_\_\_\_ Block \_\_\_\_\_

Find the distance and midpoint

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

$$m = \left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

1) (3,-8) (-5,2)

2) (-2,7) (8,-3)

Find the slope  $m = \frac{y_2 - y_1}{x_2 - x_1}$

3) (-5,9) (-2,0)

4) (1,7) (3,-15)

Parallel, Perpendicular, or neither?

5)  $y = 2x - 7$   
 $y = -\frac{1}{2}x + 1$

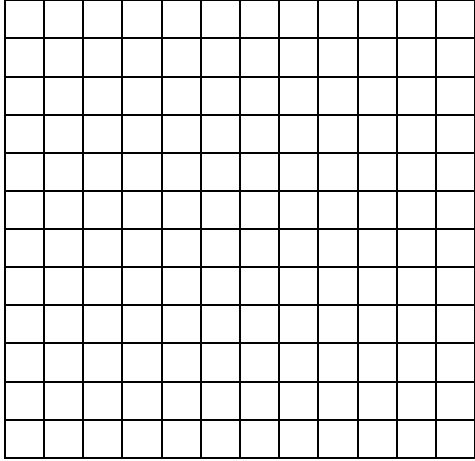
6)  $y = 6x - 5$   
 $y = 6x + \frac{1}{2}$

7)  $y = x$   
 $y = x - 2$

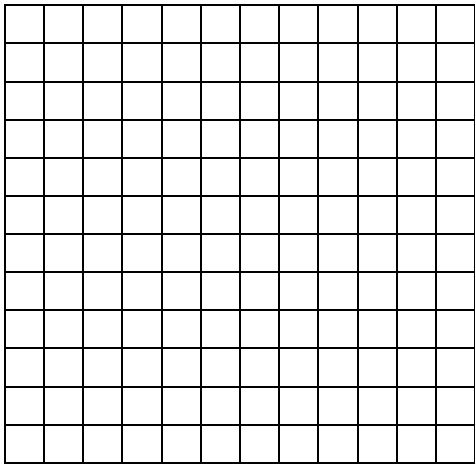
Write the equation of the line through:  $y - y_1 = m(x - x_1)$

8) (2,3) and (6,11)

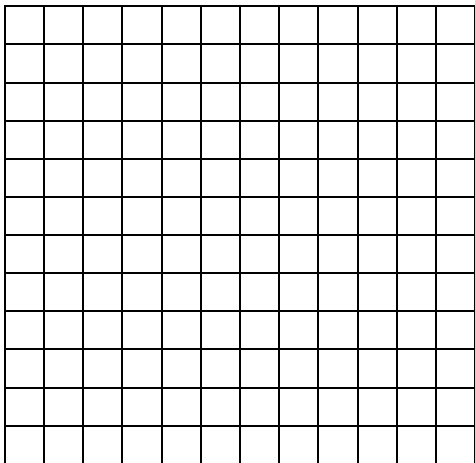
9) (-6,-2) and (-10,-14)



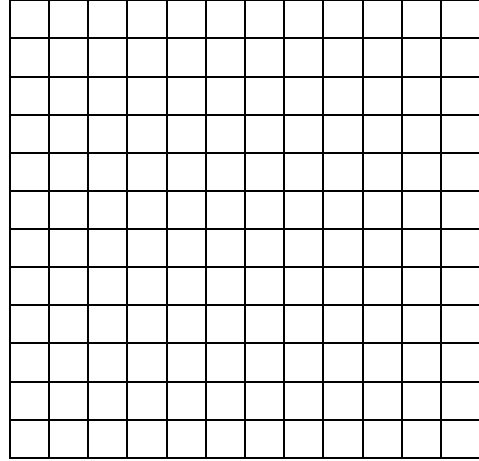
$$10) y = \frac{2}{3}x + 2$$



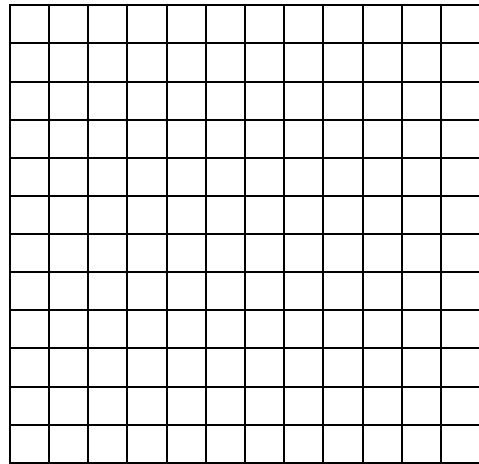
$$12) 2x + 5y = 10$$



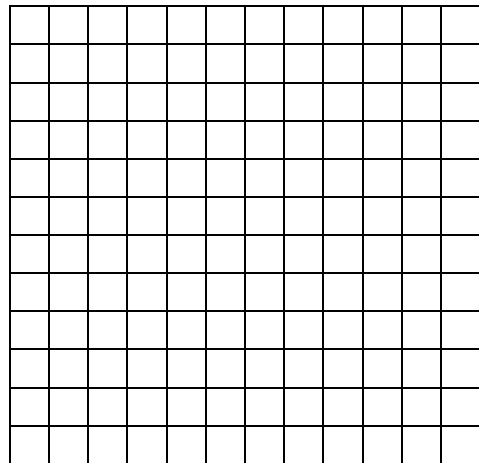
$$14) (x-2)^2 + (y+3)^2 = 9$$



$$11) y = -\frac{1}{2}x - 1$$



$$13) 3x - 6y = 12$$



$$15) (x-3)^2 + y^2 = 4$$