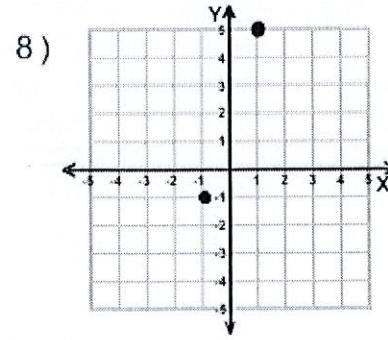
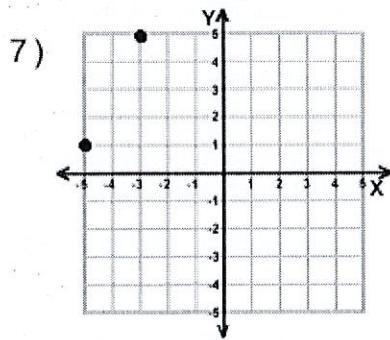
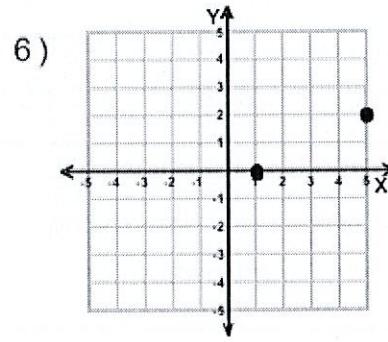
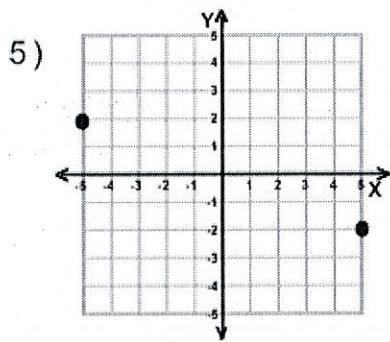
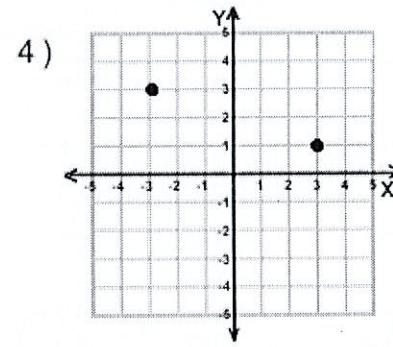
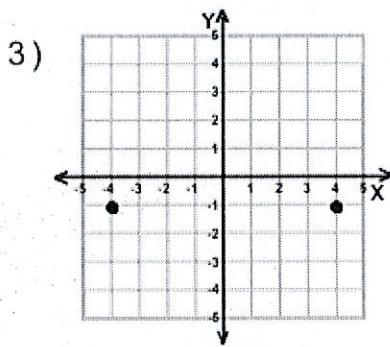
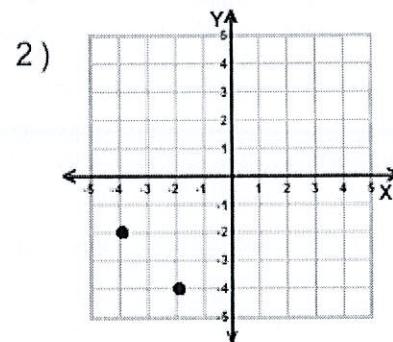
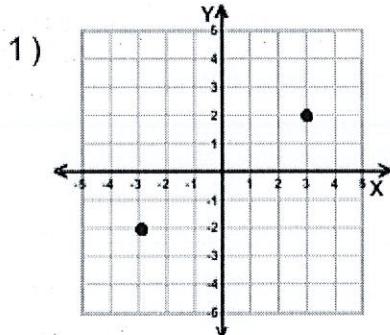


Find the equation of the line of reflection.



For each linear equation write the slope of a line parallel to the given line.

9. $y = 2x + 4$

10. $2x + 4y = 8$

For each linear equation write the slope of a line perpendicular to the given line.

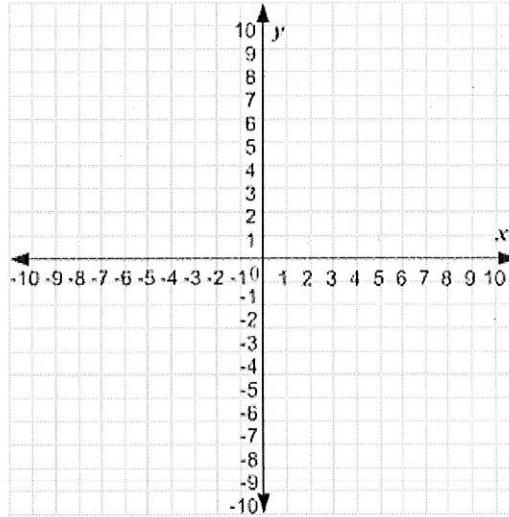
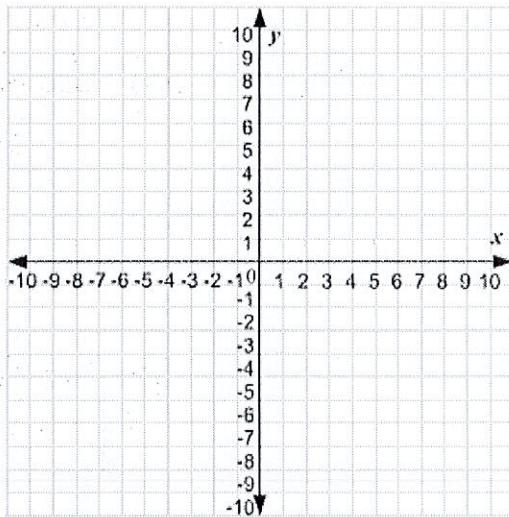
11. $y = -5x + 1$

12. $7y + 4x = 3$

Find the slope and the distance between each pair of points.

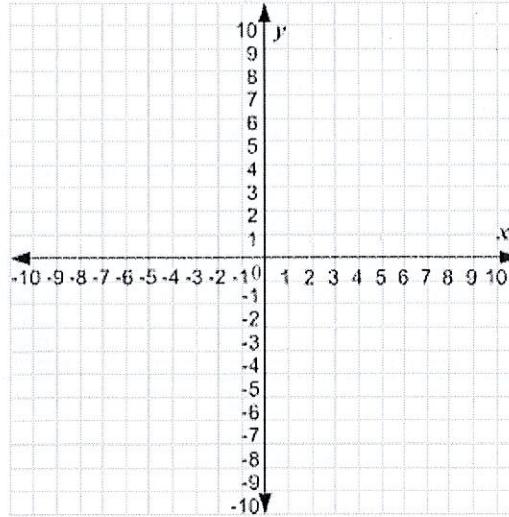
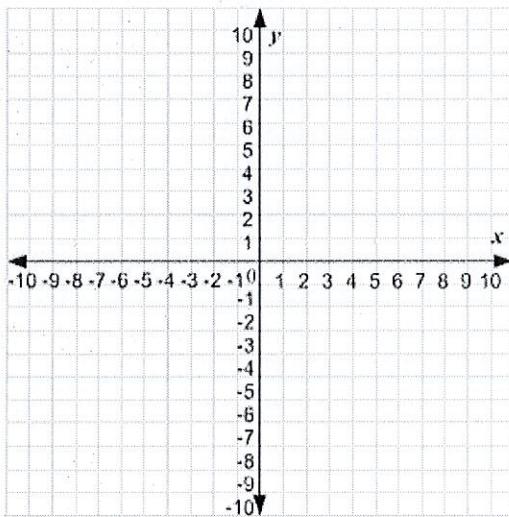
13. (-4, -1) (6, 7) Slope _____ Distance _____

14. (-1, 1) (3, 4) Slope _____ Distance _____



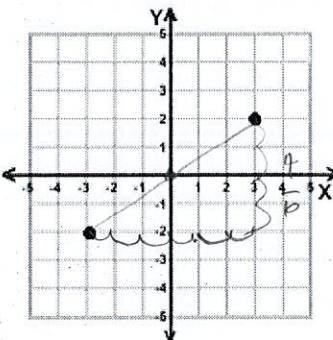
15. (-5, 5) (1, -2) Slope _____ Distance _____

16. (-2, 4) (0, 3) Slope _____ Distance _____



Find the equation of the line of reflection.

1)

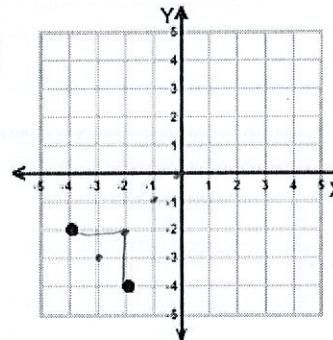


$$m = \frac{2}{3}$$

$$m = -\frac{3}{2}$$

$$y = -\frac{3}{2}x$$

2)

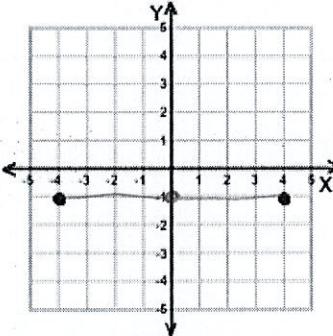


$$m = -\frac{2}{2} = -1$$

$$m = -1$$

$$x = x$$

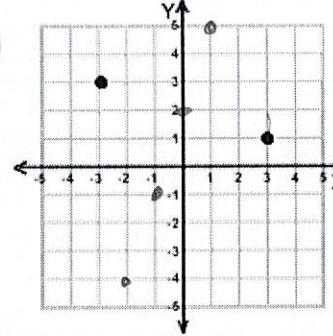
3)



$$m = 0$$

$m = \text{undefined}$
slope

4)

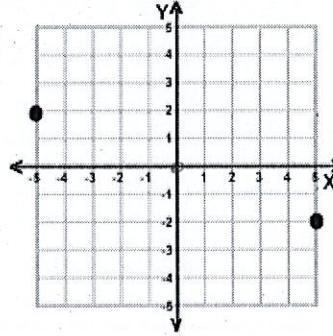


$$-\frac{2}{6} = -\frac{1}{3}$$

$$m = 3$$

$$y = 3x + 2$$

5)

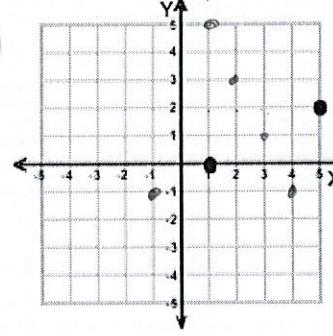


$$-\frac{4}{-10} = \frac{2}{5}$$

$$m = \frac{5}{2}$$

$$y = \frac{5}{2}x$$

6)

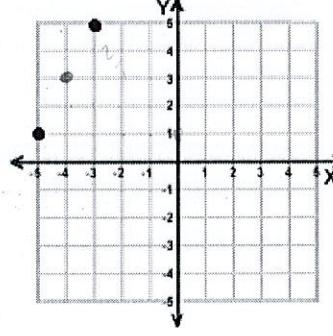


$$m = \frac{2}{4} = \frac{1}{2}$$

$$m = -2$$

$$y = -2x + 7$$

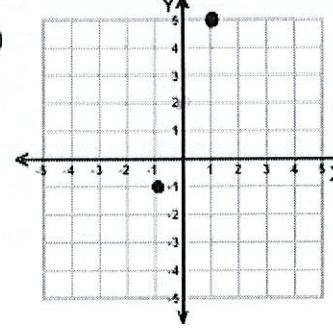
7)



$$m = \frac{2}{1}$$

$$y = \frac{1}{2}x + 1$$

8)



$$m = \frac{3}{1}$$

$$m = -\frac{1}{3}$$

$$y = -\frac{1}{3}x + 2$$

For each linear equation write the slope of a line parallel to the given line.

7. $y = 2x + 4$ answers will vary

$$\boxed{y = 2x - 2}$$

8. $2x + 4y = 8$

$$\begin{aligned} -2x & \quad -2x \\ 4y &= -2x + 8 \\ \frac{4y}{4} &= \frac{-2x}{4} + \frac{8}{4} \end{aligned}$$

$$\begin{aligned} y &= -\frac{1}{2}x + 2 \\ \boxed{y = -\frac{1}{2}x + 2} \end{aligned}$$

For each linear equation write the slope of a line perpendicular to the given line.

9. $y = -5x + 1$ answers will vary

$$\boxed{y = \frac{1}{5}x}$$

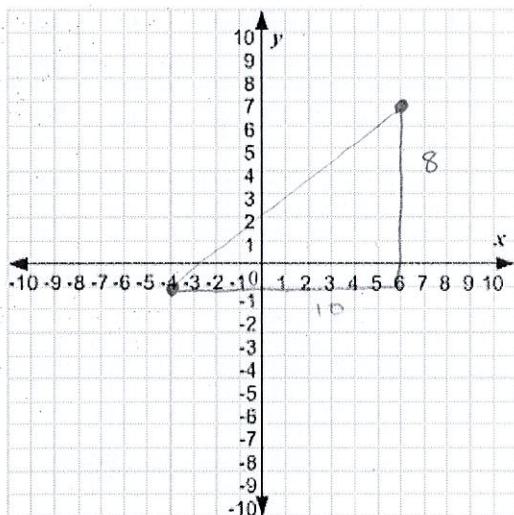
10. $7y + 4x = 3$

$$\begin{aligned} -4x & \quad -4x \\ 7y &= -4x + 3 \\ \frac{7y}{7} &= \frac{-4x}{7} + \frac{3}{7} \\ y &= -\frac{4}{7}x + \frac{3}{7} \end{aligned}$$

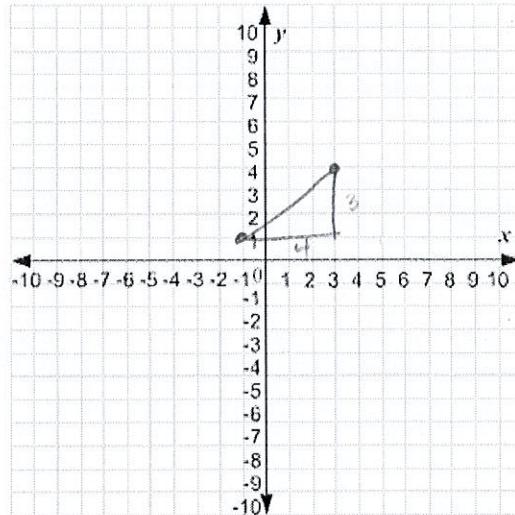
$$\boxed{y = \frac{7}{4}x}$$

Find the slope and the distance between each pair of points.

11. $(-4, -1) (6, 7)$ Slope $\frac{4}{5}$ Distance 12.8 or $\sqrt{164}$ 12. $(-1, 1) (3, 4)$ Slope $\frac{3}{4}$ Distance 5

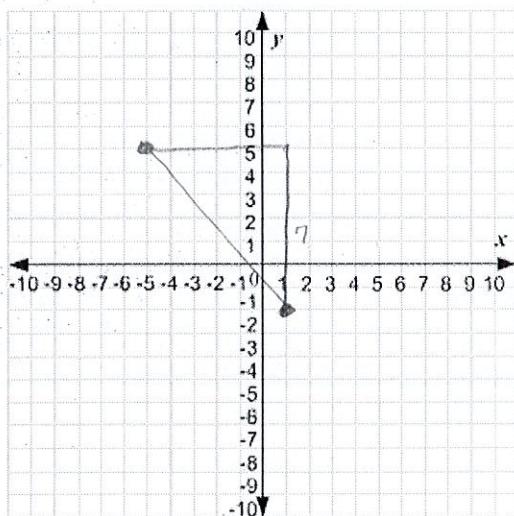


$$\begin{aligned} m &= \frac{8}{10} = \frac{4}{5} \\ 8^2 + 10^2 &= c^2 \\ 64 + 100 &= c^2 \\ \sqrt{164} &= c \\ 12.8 &= c \end{aligned}$$



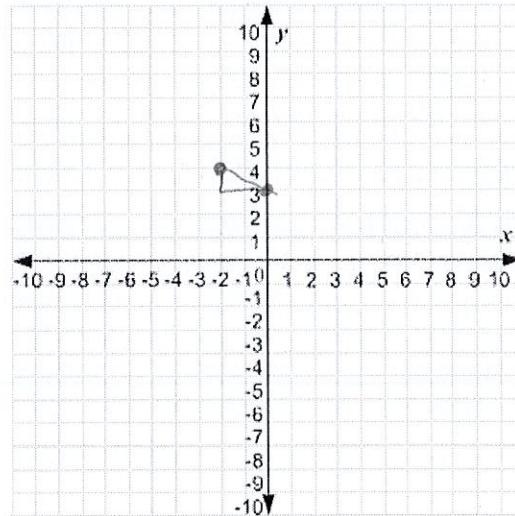
$$\begin{aligned} 3^2 + 4^2 &= c^2 \\ 9 + 16 &= c^2 \\ 25 &= c^2 \\ \sqrt{25} &= c \\ 5 &= c \end{aligned}$$

13. $(-5, 5) (1, -2)$ Slope $-\frac{7}{6}$ Distance 9.2



$$\begin{aligned} 6^2 + 7^2 &= c^2 \\ 36 + 49 &= c^2 \\ 85 &= c^2 \\ 9.2 &= c \end{aligned}$$

14. $(-2, 4) (0, 3)$ Slope $-\frac{1}{2}$ Distance 2.23 or $\sqrt{5}$



$$\begin{aligned} 1^2 + 2^2 &= c^2 \\ 1 + 4 &= c^2 \\ 5 &= c^2 \end{aligned}$$

