

MA20SPH

Coordinate Geometry Test Review

1. Find the distance between the points:

- a) A(-2, 6) and B(-2, -5) $\sqrt{121} = 11$
 b) C(-4, 8) and D(9, 2) $\sqrt{205} = 14.3$
 c) E(7, 8) and F(-5, 3) $\sqrt{169} = 13$

2. Find the midpoint of the following pairs of points:

- a) A(-4, 9) and B(12, 1) $(4, 5)$
 b) C(7, 5) and D(3, -8) $(5, -3/2)$
 c) E(-3, -1) and F(6, 6) $(3/2, 5/2)$

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

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

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

3. If the midpoint of a line is (-6, 8) and one of the endpoints is found at G(4, -12), what are the coordinates of the other endpoint H? $(-16, 28)$

4. Find the slope of the following pairs of points:

- a) A(-5, -3) and B(6, 8) $m = 1$
 b) C(-9, 4) and D(-4, -1) $m = -1$
 c) E(8, 4) and F(-2, 4) $m = 0$

5. A road is to be connected to an overpass with a slope of 0.26. If the overpass is to be 13 metres above the road, what will the horizontal distance of the overpass be? 50m

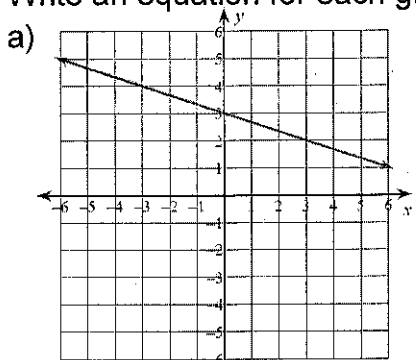
6. Graph the following:

- a) The point (3, -4) with a slope of $-\frac{1}{2}$
 b) The point (0, 2) with a slope of 3
 c) The point (-3, -1) with a slope undefined
 d) $y = 5x$
 e) $y = 3x - 4$
 f) $y = -\frac{1}{3}x - 4$
 g) $y = -2x + 1$
 h) $y = 2$
 i) $x = -1$

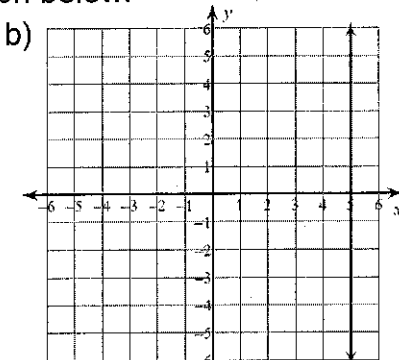
7. Rearrange each equation into $y = mx + b$ form.

- a) $3x - 4y = 7$ $y = 3/4 x - 7/4$
 b) $2x + 4y - 6 = 0$ $y = -1/2 x + 3/2$
 c) $5x = -2y + 1$ $y = -5/2 x + 1/2$
 d) $20x + 4y = 20$ $y = -5x + 5$

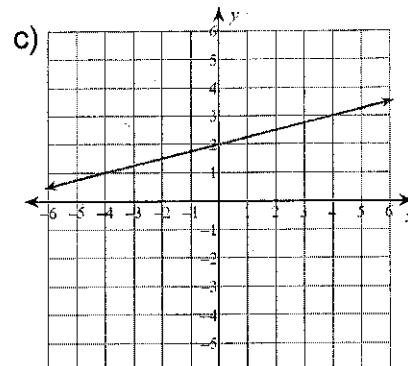
8. Write an equation for each graph below:



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



$$x = 5$$



$$y = \frac{1}{4}x + 2$$

9. Write each of the following in general form:

a) $y = \frac{2}{3}x + 4$ $2x - 3y + 12 = 0$

b) $\frac{1}{4}y - x = -\frac{2}{5}$ $20x - 5y - 8 = 0$

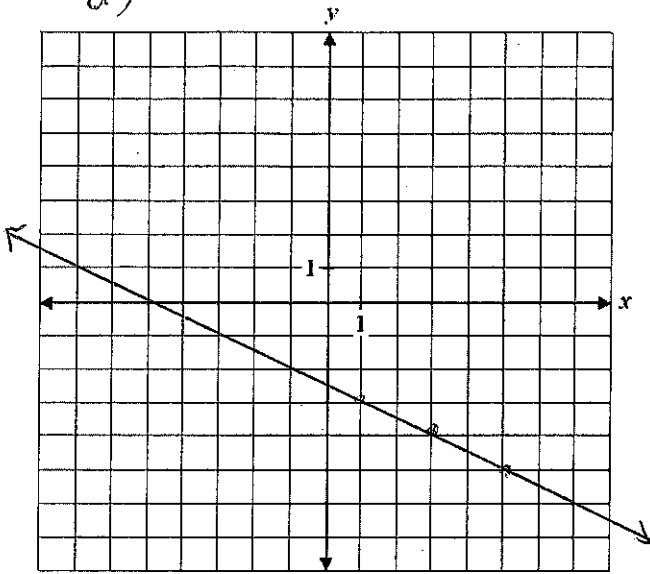
10. Find the x-intercept and y-intercept for each of the following and graph the line:

a) $3x - 2y = -1$ $(-\frac{1}{3}, 0)$ $(0, \frac{1}{2})$

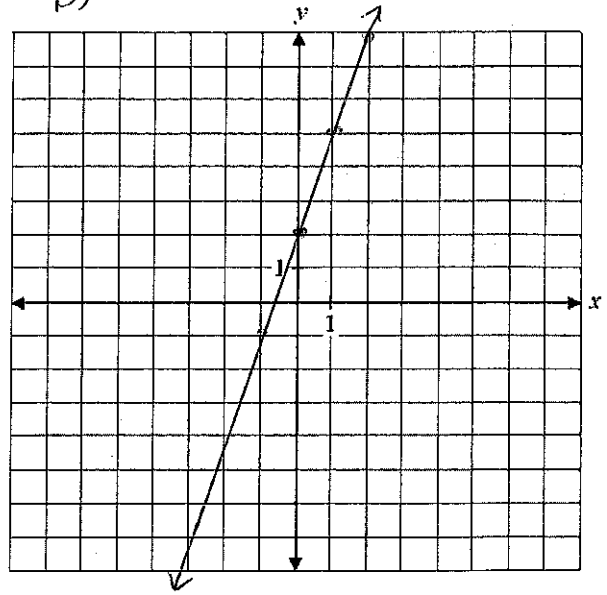
b) $6x + 2y - 3 = 0$ $(\frac{1}{2}, 0)$ $(0, \frac{3}{2})$

c) $x + 5y = -10$ $(-10, 0)$ $(0, -2)$

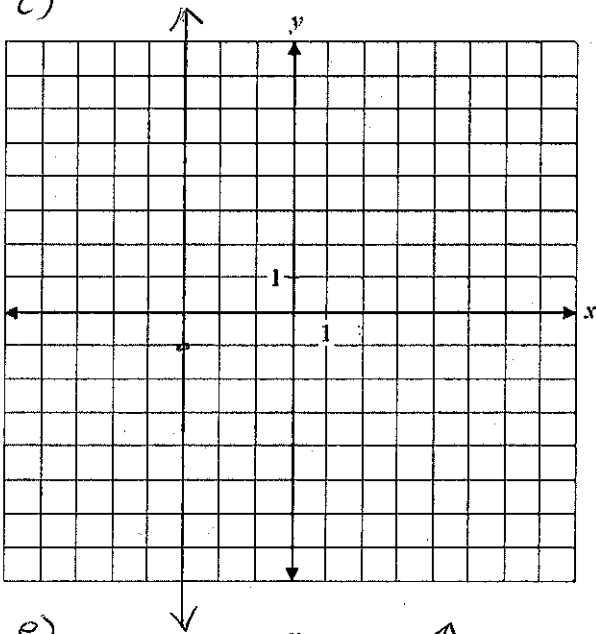
b. a)



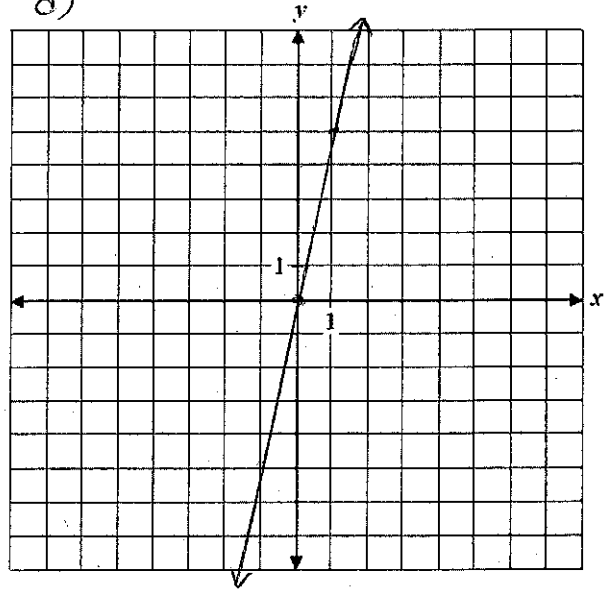
b)



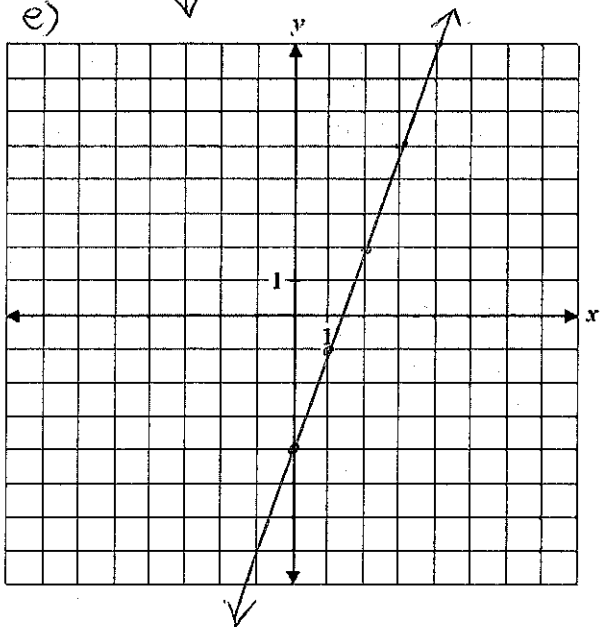
c)



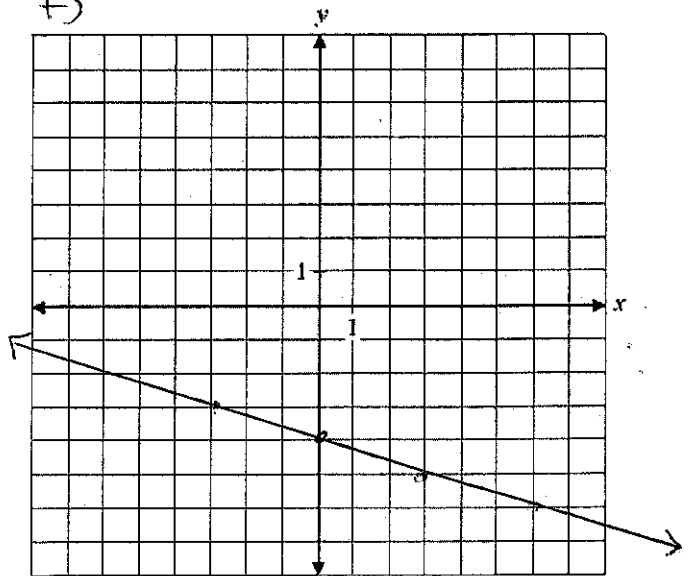
d)



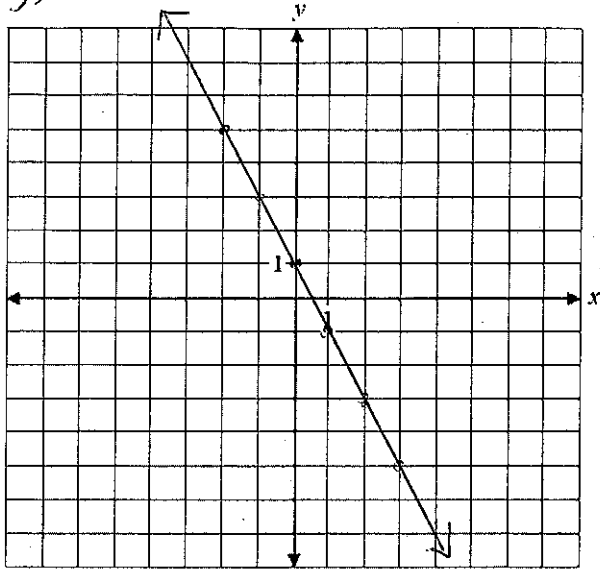
e)



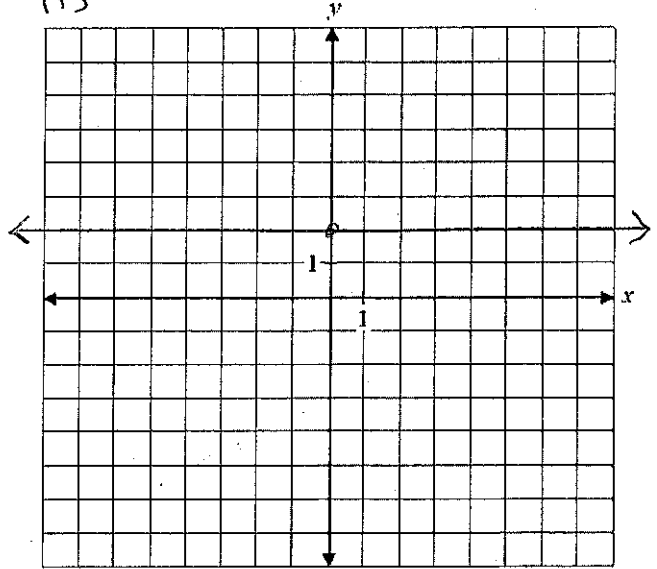
f)



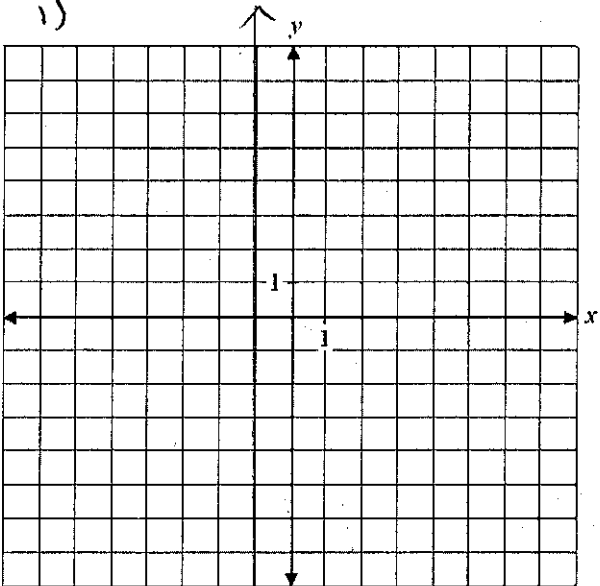
6. 9)



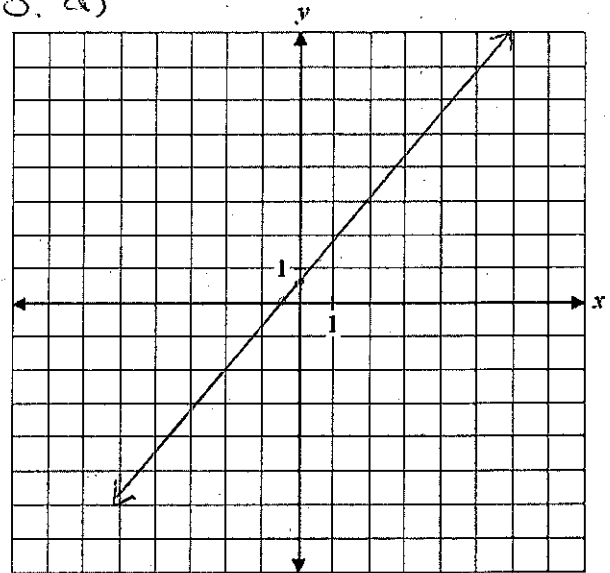
h)



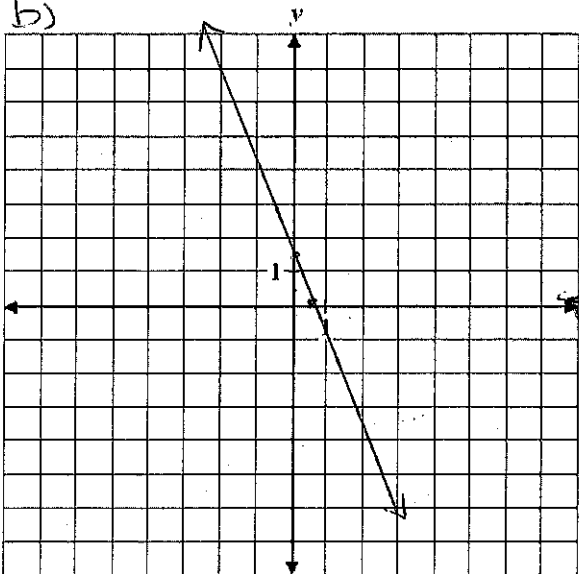
i)



10. a)



b)



c)

