

Summer Work (Part 1)

Date _____ Period _____

Solve each equation.

1) $4(1 + 8x) = 6(6 + 6x)$

2) $2(1 + 6k) = 2k + 4(8 + 2k)$

3) $-3(m - 8) = -2(3m - 3)$

4) $4(2 - 4x) = 6(-3x + 6)$

5) $-8(1 + 2r) = -4(3r + 6)$

6) $-4(b - 7) = -4(5 + 5b)$

7) $3(1 - 5n) = -4(n + 2)$

8) $2(-4v + 5) - v = 4 + 3(4v + 2)$

9) $-4(1 + 3n) = -(4 - 6n)$

10) $3(2 + 7x) = 5(1 + 4x)$

11) $5m^2 - 24m + 13 = 4 - 2m^2$

12) $48n^2 - 296n + 341 = 8n^2 + 5$

13) $5a^2 + 19a - 10 = -6$

14) $-5m = -3m^2 + 12$

$$15) 2v^2 = 7 - 5v$$

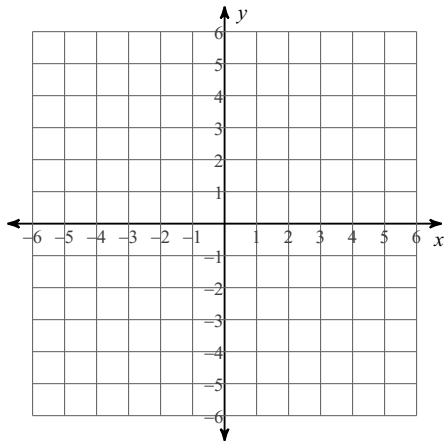
$$16) 11r^2 - 36r = 6r - r^2$$

$$17) -38 - 102v = -18v^2 - 2$$

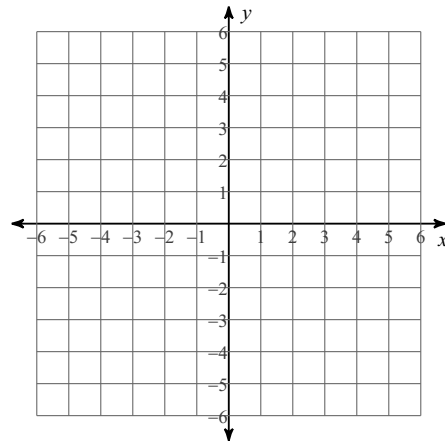
$$18) 2b^2 + 7b - 12 = 3$$

Sketch the graph of each line.

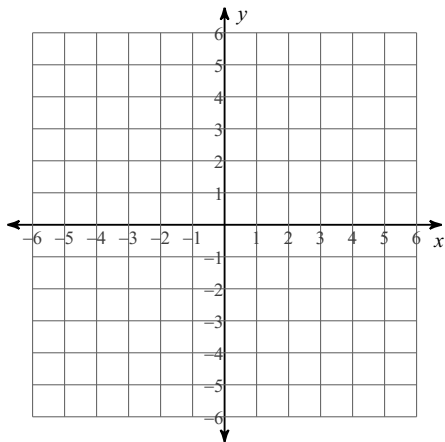
$$19) y = x + 5$$



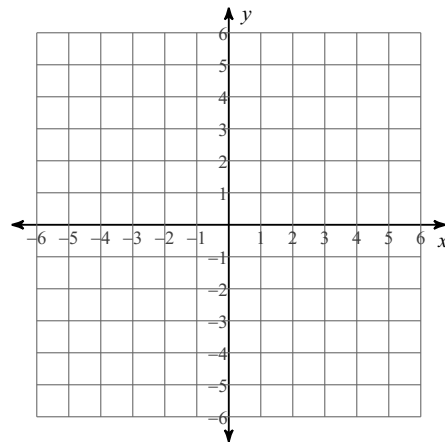
$$20) 0 = -4 - x$$



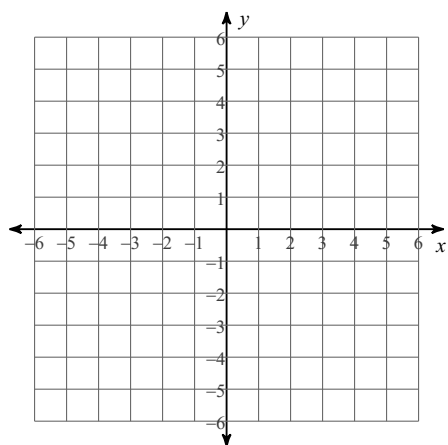
$$21) -2y - 6 = -x$$



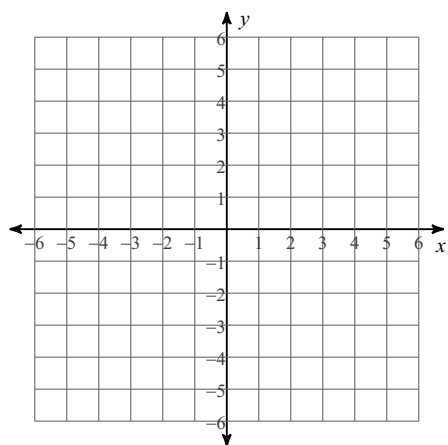
$$22) -4x = -5y$$



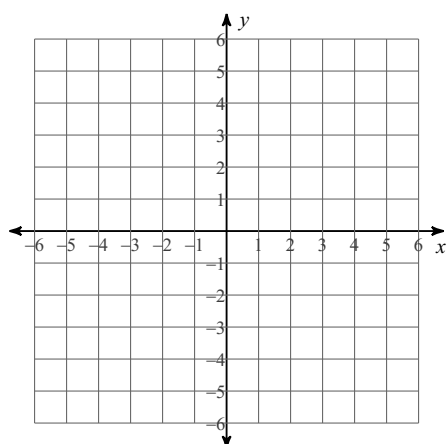
23) $0 = 5x + 2 + y$



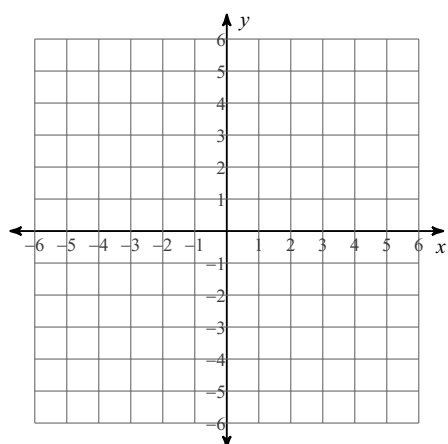
24) $12 = -3y + 7x$



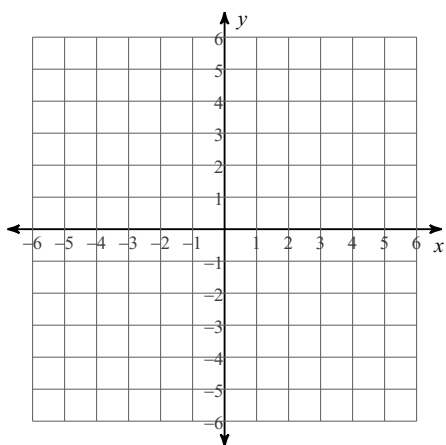
25) $0 = -4x - 6 - 3y$



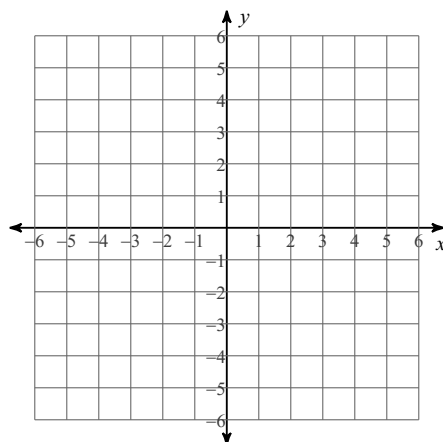
26) $-x = -y - 1$



27) $0 = 1 + y$

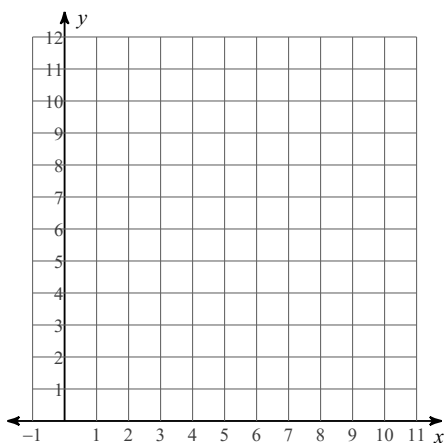


28) $-1 - \frac{4}{3}x = -y$

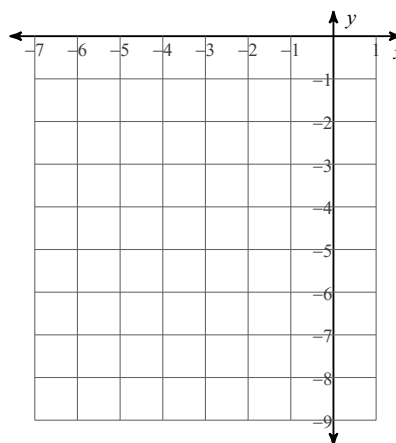


Sketch the graph of each function.

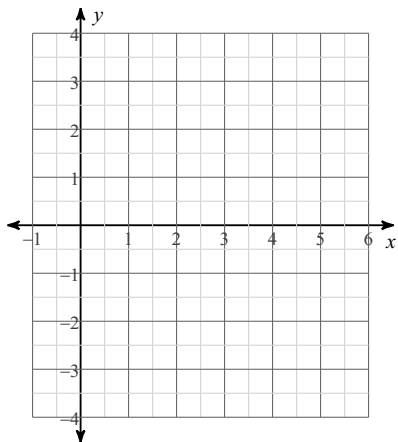
29) $y = 2x^2 - 12x + 21$



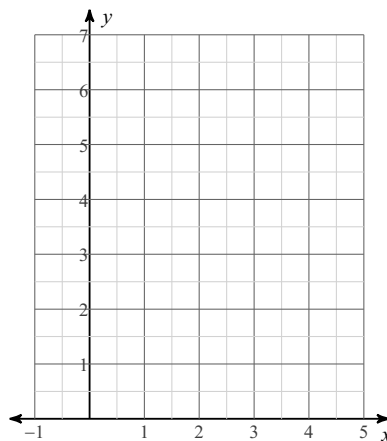
30) $y = -x^2 - 2x - 5$



$$31) y = \frac{1}{2}x^2 - 4x + 7$$



$$32) y = x^2 - 4x + 6$$



Write the slope-intercept form of the equation of the line through the given point with the given slope.

$$33) \text{ through: } (-1, 2), \text{ slope} = 2$$

$$34) \text{ through: } (-4, 5), \text{ slope} = -\frac{1}{2}$$

$$35) \text{ through: } (5, 4), \text{ slope} = 1$$

$$36) \text{ through: } (-3, -2), \text{ slope} = 1$$

$$37) \text{ through: } (5, -4), \text{ slope} = -\frac{2}{5}$$

$$38) \text{ through: } (-1, 1), \text{ slope} = -5$$

Write the slope-intercept form of the equation of the line through the given points.

$$39) \text{ through: } (0, 3) \text{ and } (4, -4)$$

$$40) \text{ through: } (-1, -1) \text{ and } (1, -2)$$

41) through: $(-5, -3)$ and $(1, -1)$

42) through: $(0, 4)$ and $(-5, -4)$

43) through: $(1, -1)$ and $(0, 4)$

44) through: $(2, -3)$ and $(0, -3)$

Write the slope-intercept form of the equation of the line described.

45) through: $(-2, -4)$, parallel to $y = \frac{5}{2}x$

46) through: $(0, 2)$, parallel to $y = 3x - 1$

47) through: $(-3, 3)$, parallel to $y = -\frac{7}{3}x + 5$

48) through: $(-5, 1)$, parallel to $y = \frac{1}{5}x + 3$

49) through: $(-4, 4)$, perp. to $y = \frac{4}{5}x - 1$

50) through: $(5, -4)$, perp. to $y = \frac{5}{8}x - 3$

51) through: $(-1, -4)$, perp. to $y = \frac{1}{3}x + 2$

52) through: $(-3, -3)$, perp. to $y = -2x + 1$