

Geometry Summer Assignment

Directions: This assignment is for students who have completed Algebra I and are taking Geometry in the 2018-2019 school year.

1) Did you read the directions?

2) What math class are you taking in the 2018-2019 school year?

Solve each equation.

3) $-2(x - 6) = -8$

4) $22 = 1 - 7x + 7$

5) $\frac{5}{3} = \frac{1}{2}v + 1 + \frac{4}{3}$

6) $-36 = -2n - 3(1 + 3n)$

7) $-\frac{15}{4} = \frac{2}{3}x - \frac{5}{2} - \frac{3}{2}x$

8) $n - 3 = n - 6$

Solve each proportion.

9) $\frac{4}{x} = \frac{3}{5}$

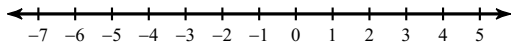
10) $\frac{k}{3} = \frac{k + 6}{4}$

Solve each inequality.

11) $129 < -4 - 7a$

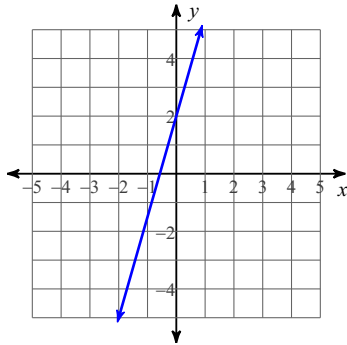
Solve each compound inequality and graph its solution.

12) $-1 < \frac{v}{6} \leq 0$

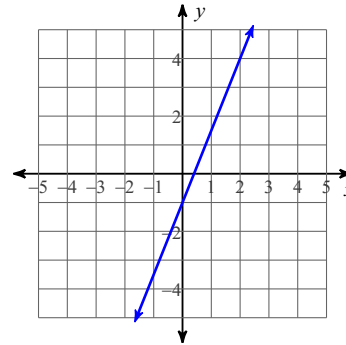


Write the slope-intercept form of the equation of each line.

13)



14)



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

15) through: $(-4, 4)$, slope = 0

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

16) through: $(-1, 1)$ and $(0, -3)$

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

17) through: $(2, 5)$, parallel to $y = 4$

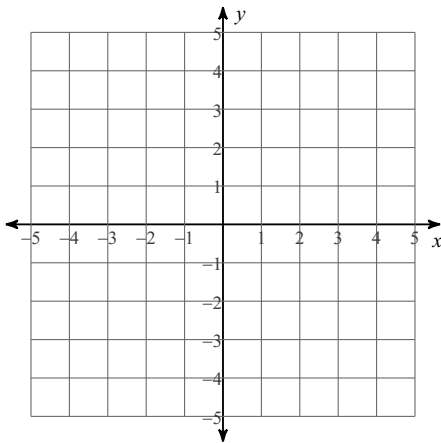
18) through: $(-5, -1)$, perp. to $y = -\frac{7}{2}x + 4$

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

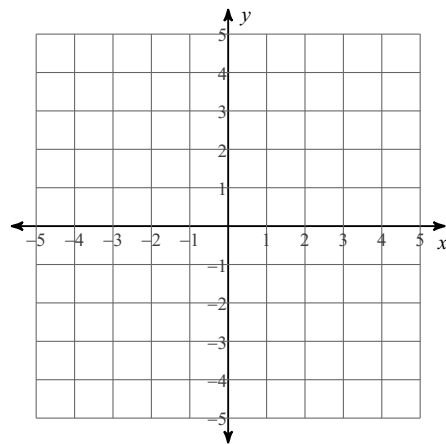
19) through: $(2, -2)$, perp. to $y = \frac{2}{3}x + 4$

Solve each system by graphing.

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



21) $8x - 3y = -12$
 $2x - 3y = 6$



Solve each system by substitution.

22) $y = 2x - 8$
 $y = 6x - 16$

23) $y = -2x - 4$
 $-x + 8y = 2$

$$24) \begin{aligned} 6x + 3y &= -24 \\ y &= x + 13 \end{aligned}$$

Solve each system by elimination.

$$25) \begin{aligned} 5x + 4y &= 24 \\ -5x - 6y &= -16 \end{aligned}$$

$$26) \begin{aligned} -6x + 8y &= -14 \\ -3x + 8y &= -23 \end{aligned}$$

$$27) \begin{aligned} 11x - 66y &= -11 \\ -x + 6y &= 1 \end{aligned}$$

$$28) \begin{aligned} 9x - 7y &= 5 \\ -2x - 2y &= 6 \end{aligned}$$

29) Aliyah and Shanice are selling cheesecakes for a school fundraiser. Customers can buy New York style cheesecakes and chocolate marble cheesecakes. Aliyah sold 1 New York style cheesecake and 6 chocolate marble cheesecakes for a total of \$70. Shanice sold 1 New York style cheesecake and 2 chocolate marble cheesecakes for a total of \$26. Find the cost each of one New York style cheesecake and one chocolate marble cheesecake.

30) Eduardo and Bill each improved their yards by planting hostas and shrubs. They bought their supplies from the same store. Eduardo spent \$51 on 1 hosta and 7 shrubs. Bill spent \$17 on 5 hostas and 1 shrub. Find the cost of one hosta and the cost of one shrub.

Simplify. Your answer should contain only positive exponents.

$$31) 2u^{-2}v^{-1}$$

$$32) 4n^0 \cdot mn^4$$

$$33) (4u^2v^2)^3$$

$$34) \frac{3mn^4}{m^4}$$

Simplify each sum.

$$35) (2 + 6x - x^4) + (2x + 3x^4 - 5x^2)$$

Simplify each difference.

36) $(5v^4 + 8 + 2v^2) - (5v^4 + 5v^2 - 1)$

Find each product.

37) $8r(4r + 5)$

38) $(6v - 7)(8v + 1)$

39) $(v - 2)(v + 2)$

40) $(5k + 4)^2$

Factor the common factor out of each expression.

41) $40a^3 + 20a^2 + 90a + 40$

Factor each completely.

42) $24n^3 - 3n^2 - 16n + 2$

43) $p^2 - 13p + 30$

44) $54r^2 + 210r - 24$

45) $25n^2 - 16$

Solve each equation by factoring.

46) $(2n + 5)(7n + 2) = 0$

47) $n^2 - 4n - 12 = 0$

48) $7p^2 + 4p = 0$

49) $2r^2 - 3r - 2 = -2$

Solve each equation by taking square roots.

50) $4x^2 - 4 = 296$

51) $5x^2 + 6 = 411$

Simplify.

52) $\sqrt{256}$

53) $5\sqrt{96}$

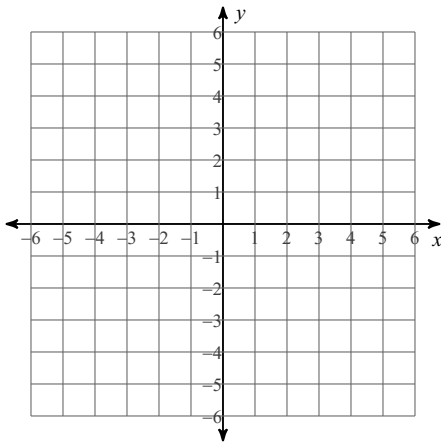
54) $\sqrt{18x^2}$

55) $8\sqrt{147r^2}$

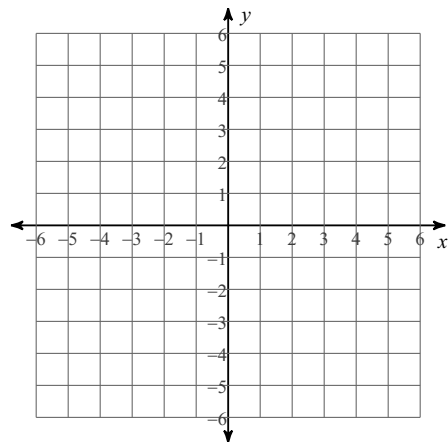
56) $8\sqrt{125mn^3}$

Sketch the graph of each line.

57) $y = \frac{5}{3}x - 5$

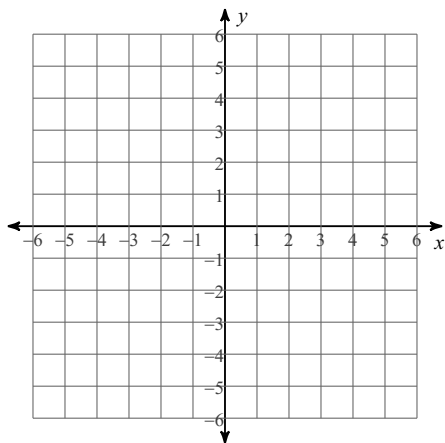


58) $x - y = -3$

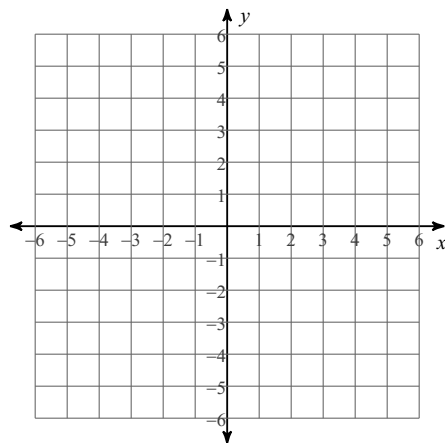


Sketch the graph of each linear inequality.

59) $y \geq -\frac{1}{2}x + 2$

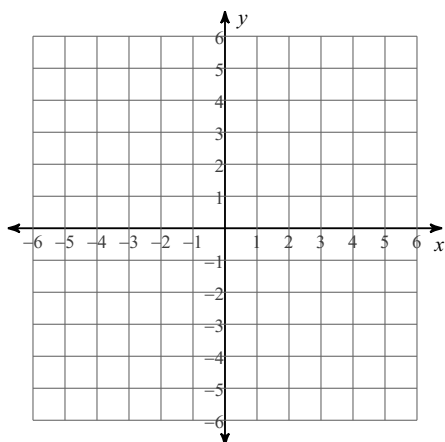


60) $y > \frac{4}{5}x + 3$



Sketch the graph of each line.

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



62) $8x - y = 5$

