Algebra 1a Final REVIEW

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alg1aFinal f18 REVIEW

Solve the equation.

1. $-5h = 50$
   a. $h = 55$
   b. $h = -10$
   c. $h = -250$
   d. $h = 45$

2. $\frac{k}{-6} = -4$
   a. $k = -24$
   b. $k = \frac{2}{3}$
   c. $k = 24$
   d. $k = 2$

3. $12 = \frac{h+6}{-7}$
   a. $h = 90$
   b. $h = -90$
   c. $h = -42$
   d. $h = -126$

4. $29 = 7u - 17u - 1$
   a. $u = -3$
   b. $u = 3$
   c. $u = -2$
   d. $u = 4$

5. $-70 = 2(-5n - 5)$
   a. $n = -8$
   b. $n = 8$
   c. $n = -6$
   d. $n = 6$

6. $15(2 - z) + 8z = 37$
   a. $z = -9.6$
   b. $z = 4$
   c. $z = 0.3$
   d. $z = -1$

7. $|z - 7| + 2 = 8$
   a. $z = 13, z = -1$
   b. no solution
   c. $z = 13, z = 1$
   d. $z = 13$

8. $9|2y + 5| = 18$
   a. $y = \frac{3}{2}$
   b. no solution
   c. $y = -\frac{3}{2}, y = \frac{7}{2}$
   d. $y = -\frac{3}{2}, y = -\frac{7}{2}$

9. The admission fee to an amusement park is \$21. It costs an additional d dollars to rent a locker to hold your belongings. The total cost for 5 people to enter the amusement park and each rent a locker is \$135. How much does it cost for one person to rent a locker?
   a. \$27
   b. \$6
   c. \$4
   d. \$10

10. Which equations are equivalent to the given literal equation?

    $4 + 2(7x + 6y) - 9 = 7x - 8y + 3 - 3y - 6x$

    a. $x = \frac{-23y + 8}{13}$
    b. $x = \frac{-13y + 8}{23}$
    c. $y = \frac{-23x + 8}{13}$
    d. $y = \frac{-13x + 8}{23}$

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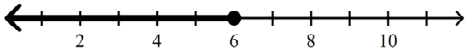
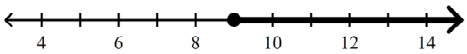
Solve the inequality. Graph the solution.

11. $8x - 2x + 3 \geq 24 + 33$

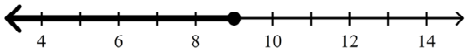
a. $x \leq 6$



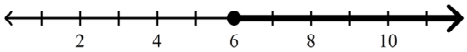
b. $x \geq 9$



c. $x \leq 9$



d. $x \geq 6$



Solve the inequality.

12. $6x - 2 > 2x + 4$

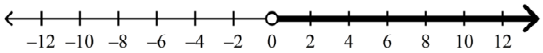
a. all real numbers

b. no solution

c. $x > \frac{3}{2}$

d. $x < \frac{3}{2}$

13. Which of the inequalities are represented by the graph?



a. $x + 1 > 1$

b. $x \geq 0$

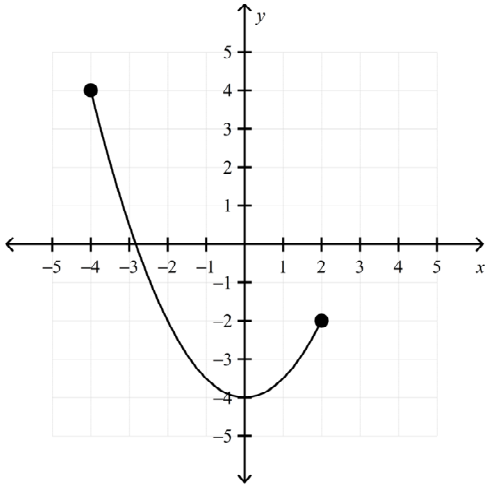
c. $x > 0$

d. $-8 < x - 11$

e. $-10 < x - 10$

Find the domain and range of the function represented by the graph.

14.



a. domain: $-4 < x < 2$, range: $-4 < y < 4$

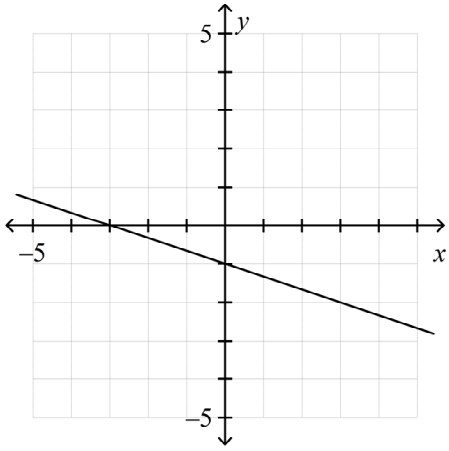
b. domain: $-4 \leq x \leq 4$, range: $-4 \leq y \leq 2$

c. domain: $-4 < x < 4$, range: $-4 < y < 2$

d. domain: $-4 \leq x \leq 2$, range: $-4 \leq y \leq 4$

Graph the linear function.

15.



a. $g(x) = \frac{2}{3}x + 2$

b. $g(x) = 3x + 2$

c. $g(x) = -\frac{1}{4} - 1$

d. $g(x) = -\frac{1}{3}x - 1$

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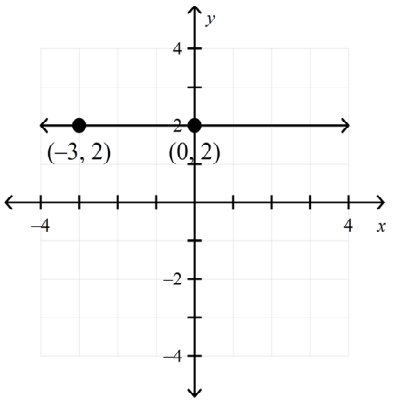
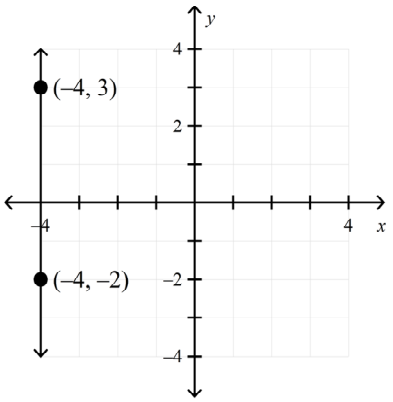
Describe the slope of the line. Then find the slope.

16.



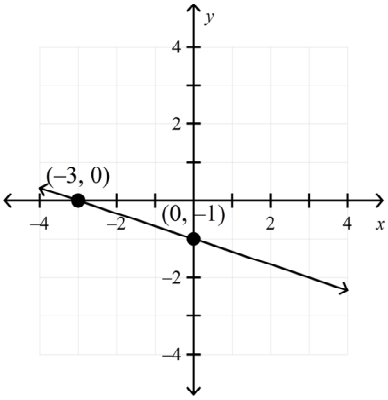
a. negative; –3
b. positive; 1
c. zero; 0
d. negative; –1

17.



a. positive; 1
b. negative; –1
c. undefined
d. zero; 0

18.



a. negative; $-\frac{1}{3}$
b. negative; –3
c. positive; $\frac{1}{3}$
d. positive; 3

Write an equation of the line with the given slope and *y*-intercept.

19. slope: –2
y-intercept: 0
a. $m = -2$
b. $y = -2$
c. $x = 0$
d. $y = -2x$

Write an equation of the line that passes through the given points.

20. (–4, 5), (0, –9)
a. $y = -4$
b. $y = -\frac{7}{2}x - 9$
c. $y = -\frac{5}{2}x - 5$
d. $y = -\frac{2}{5}x + \frac{17}{5}$

Algebra 1a Final REVIEW

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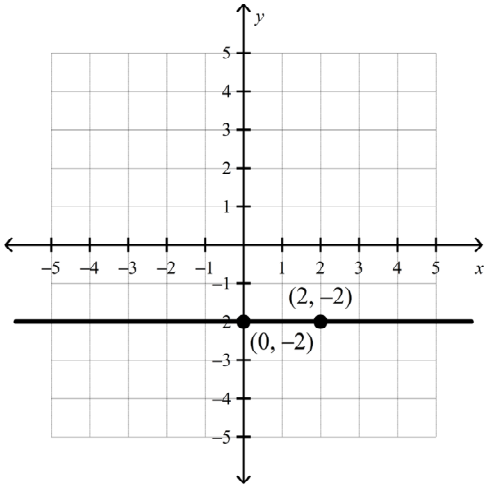
Write an equation in point-slope form of the line that passes through the given point and has the given slope.

21. (1, 8); $m = 3$
    a. $y - 8 = 3(x - 1)$
    b. $y = 3x - 5$
    c. $y + 8 = 3(x + 1)$
    d. $y = 3x$

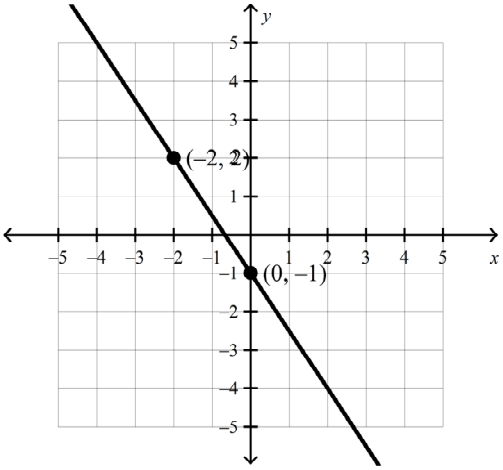
Write an equation of the line in slope-intercept form.

22.



a. $y = -2$
b. $y = 2$
c. $y = x + 2$
d. $y = x - 2$

23.



a. $y = -\frac{2}{3}x - 1$
b. $y = -\frac{3}{2}x - 1$
c. $y = -\frac{2}{3}x + 1$
d. $y = -\frac{3}{2}x + 1$

24. Write an equation of the line that passes through the given point and is parallel to the given line.

    (–6, –1); $y = -2x + 2$

    a. $y = 2x - 13$
    b. $y = 2x + 2$
    c. $y = -2x - 13$
    d. $y = -2x + 11$

25. Write an equation of the line that passes through the given point and is perpendicular to the given line.

    (–6, –5); $y = 3x + 4$

    a. $y = -\frac{1}{3}x - 3$
    b. $y = 3x - 7$
    c. $y = -\frac{1}{3}x - 7$
    d. $y = -3x + 4$

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Tell whether the ordered pair is a solution of the system of linear equations.

26. $y = 4x + 12$

$y = -x + 2$

$(-2, 4)$

a. No
b. Yes

27. $-6x + 3y = -6$

$7x - 7y = -7$

$(4, 6)$

a. Yes
b. No

Solve the system of linear equations. Check your solution.

28. $y = -x + 29$

$y = x + 3$

a. (11, 18)
b. (16, 13)
c. (13, 16)
d. (12, 15)

29. $8x - 8y = -8$

$9x - y = 7$

a. (1, 2)
b. (1, –7)
c. (2, 3)
d. (0, –7)

30. $2x + 2y = -22$

$x + y = -11$

a. (2, –13)
b. (–3, –8)
c. no solution
d. infinitely many solutions

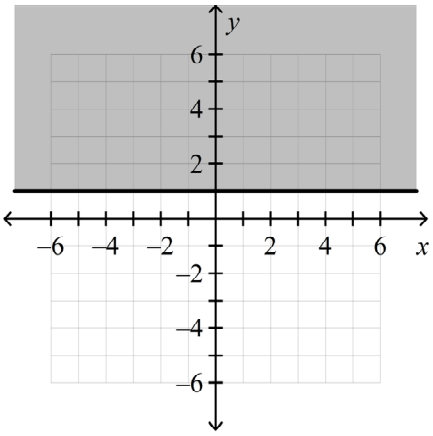
31. $-2x - 2y = -2$

$x + y = 1$

a. (–2, 3)
b. no solution
c. infinitely many solutions
d. (6, –5)

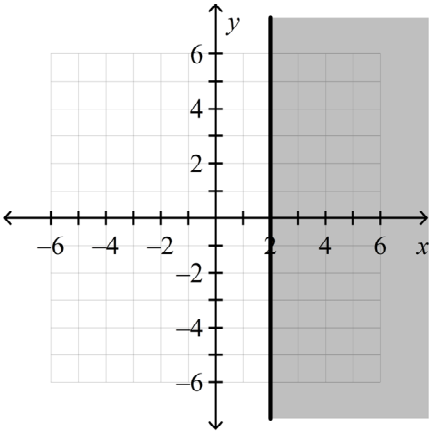
Graph the inequality in a coordinate plane.

32.



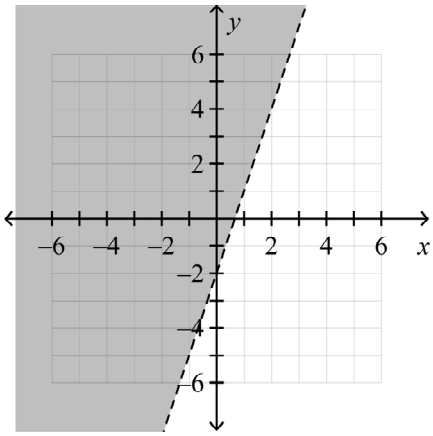
a. $y \geq 1$
b. $x > -1$
c. $y < -1$
d. $x < -1$

33.



a. $y > -1$
b. $x \geq 2$
c. $y < -1$
d. $x > 1$

34.



a. $y \geq -\frac{2}{3}x$

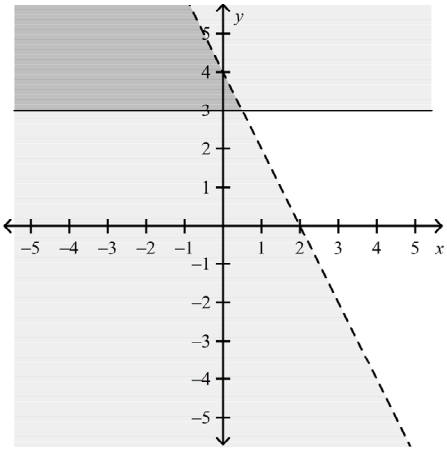
b. $y \leq 2x + 1$

c. $y > 3x - 2$

d. $y > \frac{1}{2}x - 1$

Graph the system of linear inequalities.

35.



a. $y \geq 3$

$y < -2x + 4$

b. $y < 3$

$y < -2x + 4$

c. $y \geq 3$

$y \leq -2x + 4$

d. $y \geq 3$

$y > -2x + 4$

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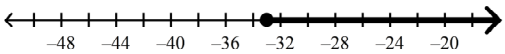
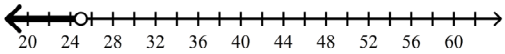
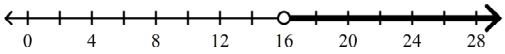
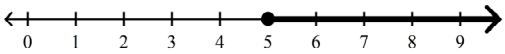
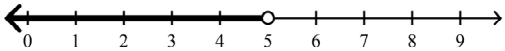
Match the inequality below with its graph.

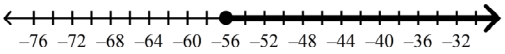
a. 

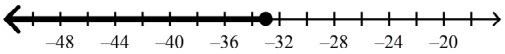
b. 

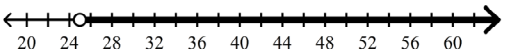
c. 

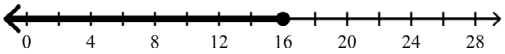
d. 

e. 

f. 

g. 

h. 

i. 

36. $3n < 15$

37. $-4 > -\frac{1}{4}f$

38. $\frac{k}{3} \geq -11$

39. $\frac{d}{-4} \leq 14$

40. $20 > \frac{4}{5}w$

41. $-5t \leq -25$