

Circle your answers.

1) Solve $|3x - 2| = 13$

2) $\frac{2}{5}(3x - 2) = \frac{9}{10}$

3) $|3x + 6| \leq 18$



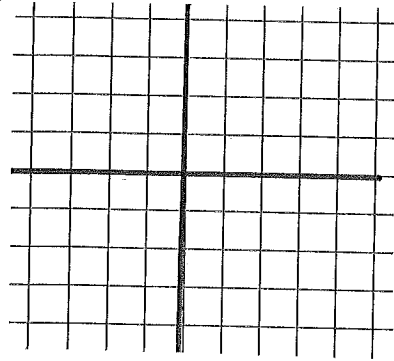
4) $|4x - 8| > 12$



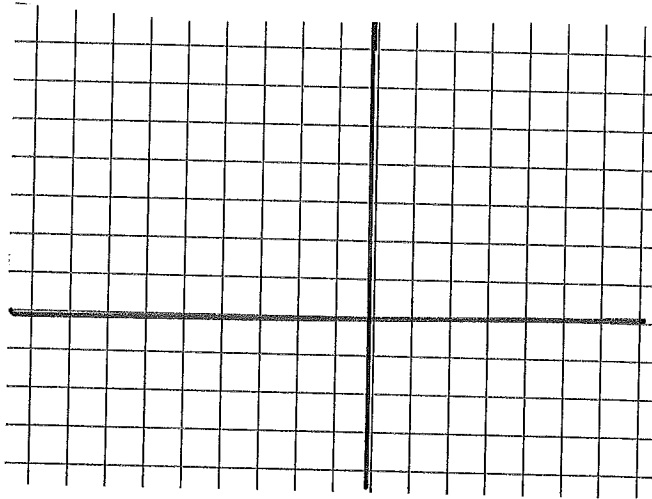
5) Simplify $5 - 3(4x + 7)$

Graph the following.

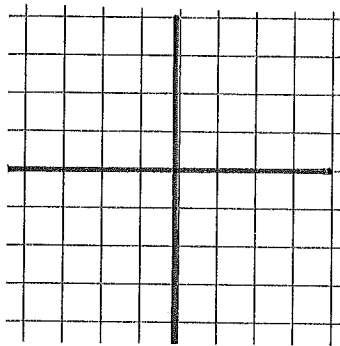
6) $y = |-x|$



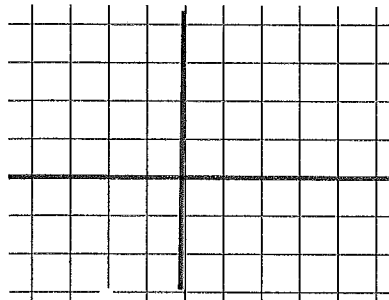
7) $y - 2 = |x + 4|$



8) $y = -2$



9) $x = 3$



10) $-4 \leq x < 5$



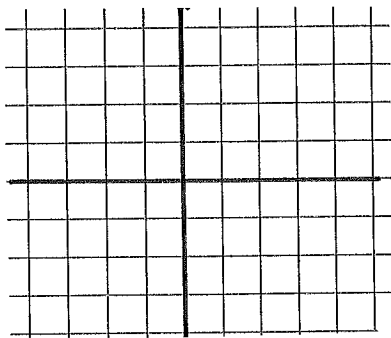
Graph final answer here.

- 11) Graph $x > 3$ or $x < 6$

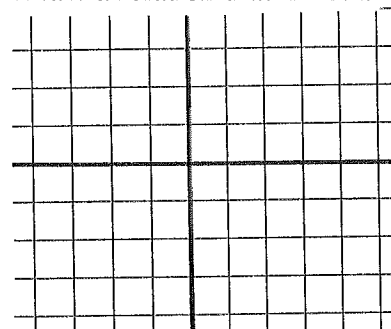


- 12) Solve $-3(n - 4) \leq -6$

- 13) Draw a function



- 14) Draw a relation that is not a function



- 15) Solve the system

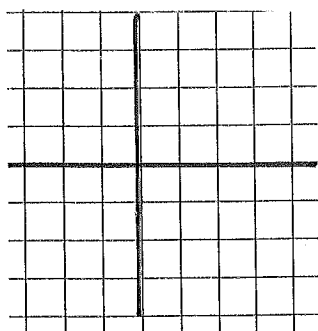
$$9x + 2y = 7$$

$$4x - 3y = 42$$

16) Complete the square $x^2 - 5x + \underline{\hspace{2cm}}$

17) Find the discriminant $5x^2 + 3x - 2 = 0$

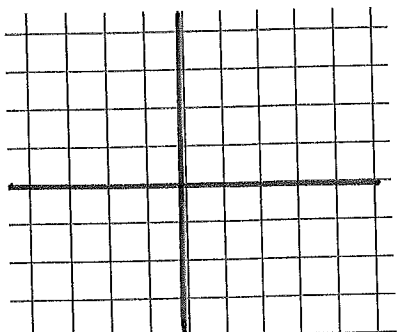
18) Draw a parabola with two real solutions.



Discriminant

+ - 0

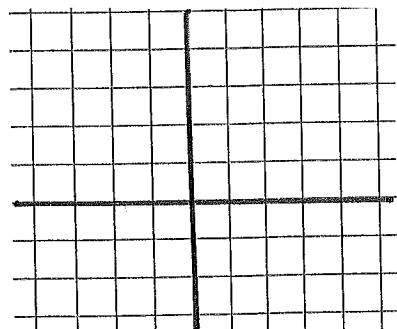
19) Draw a parabola with one real solution.



Discriminant

+ - 0

20) Draw a parabola with no real and two imaginary solutions.



Discriminant

+ - 0

Advanced Algebra 2A

Garrity

Review for Final Exam

Name _____

Date _____

Hour _____

Score _____

1) Solve $63 \div (-9)$

2) Solve $x^2 - 2x + 1$ when $x = -1$?

3) Solve $-2x + 3 = 3x - 7$

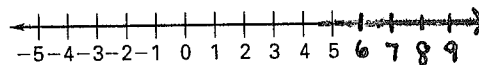
4) Solve $P = 2l + 2w$ for l

5) A rectangular box measures 25 cm long, 17 cm high, and 15 cm wide. How much wrapping paper is required in order to wrap the box?

6) Solve the inequality $3(x - 2) \geq x + 10$

7) Solve for x $|2x - 1| = 5$

8) Graph $|2x - 5| > 9$



9) If $f(x) = 5x^2 - 2x + 1$, what is $f(-2)$?

10) Give an example of a

a) linear function

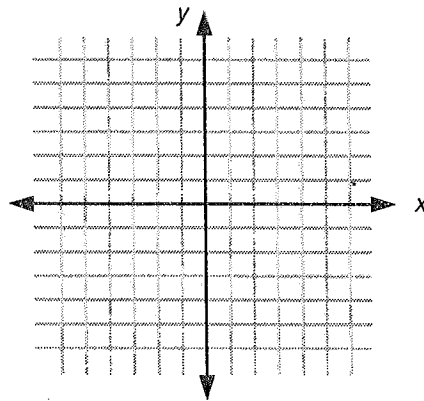
b) quadratic function

c) cubic function

d) absolute value function

11) What is the slope of the line that passes through $(-5, 4)$ and $(-1, 8)$?

12) Graph the function $3x - 5y = 15$

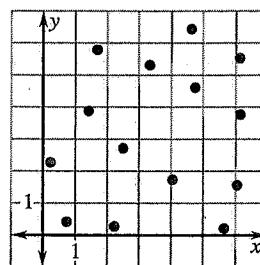


13) What is the equation of the line that passes through the point $(-2, -3)$ and has a slope of 4?

14) What is the equation of the line that passes through the point $(-1, 7)$ and is parallel to the line $y = -2x - 1$?

15) The variables x and y vary directly, and $y = 18$ when $x = 36$. Write an equation that relates the variables.

16) What is the correlation represented by the scatter plot shown?



(A) positive

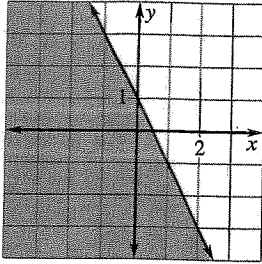
(B) negative

(C) relatively no correlation

(D) undefined

(E) none of these

17) Write an inequality represented by the graph shown.



18) What is the vertex of the graph of the function $y = |x + 4| - 6$?

19) Solve the system of linear equations. (ordered pair)

$$-3x - 5y = -23$$

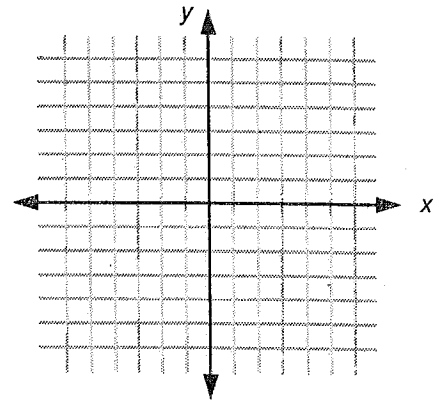
$$2x - 4y = -14$$

20) Graph the system of linear inequalities.

$$x \geq -1$$

$$y < 3$$

$$y \geq 2x - 1$$



21) At which point does the graph of $7x - 14y - 4z = -28$ cross the z-axis?

22) Simplify in matrix form.

$$2 \begin{bmatrix} 2 & 0 \\ -3 & 4 \end{bmatrix} - 3 \begin{bmatrix} -6 & -2 \\ 1 & 1 \end{bmatrix}$$

23) If A is a 4×5 matrix and B is a 5×4 matrix, what are the dimensions of AB ?

24) What is the determinant of $\begin{bmatrix} 4 & -5 \\ -8 & -3 \end{bmatrix}$?

25) What is the inverse of $\begin{bmatrix} -5 & 4 \\ -1 & 1 \end{bmatrix}$?

26) What matrix is the solution matrix for the linear system $\begin{cases} -x + 5y = -23 \\ 4x - 2y = 20 \end{cases}$?

27) What is the vertex of the graph of
 $y = -5(x + 2)^2 + 18$?

28) What is a correct factorization of
 $x^2 - 7x + 10$?

29) What is the simplified form of the
expression $\sqrt{162}$?

30) What does the product $(3 - 6i)(9 - 4i)$
equal?

31) If $x^2 - 32x + c$ is a perfect
trinomial, what is the value of c ?

32) What are the solutions of $2x^2 + 9x + 2 = 0$?

33) What is the solution of
 $x^2 + x - 20 > 0$?

34) What is the value of $-2^2 \cdot 2^4$?

35) What is the simplified form of

$$\left(\frac{2x^{-3}}{3y^{-4}}\right)^{-2}?$$

36) What is the value of

$$f(x) = -8x^5 + 6x^4 - 5x^3 + 10x^2 + 9x - 1$$

when $x = -1$?

37) Define function.

38) Standard Form of a Line is $Ax + By = C$

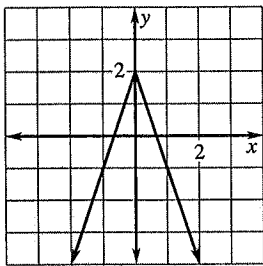
a) slope?

b) y -intercept?

39) Write the equation for this line in standard form. $7x - 13 = 4y$

40) Which point is on the line given by the equation $y + 3 = -4(x - 11)$

41) Which function is represented by the graph?



A $y = |3x + 2|$

B $y = |2 - 3x|$

C $y = -|3x| + 2$

D $y = |-3x + 2|$

E $y = |3x| + 2$

42) Write a matrix equation that is used to solve the linear system.

$$3x - 2y = 10$$

$$-4x + y = 7$$

43) What is the vertex of the graph of $y = 2x^2 - 12x + 11$

44) Write the quadratic formula.

45) If $f(x) = 2x^2 + 5x - 7$, what is $f(-3)$?

46) Write the formula for the discriminant.

47) How many real and imaginary solutions in each equation?

a) $x^2 - 6x = -10$

b) $9 - 6x = -x^2$

c) $-6x + x^2 = -8$

48) Simplify $\sqrt{\frac{3}{7}}$

49) Expand $(3x - 4)^2$

50) If $x^2 + 12x + c$ is a trinomial square, what is the value of c ?

51) Imaginary numbers

a) $i =$

b) $i^2 =$

c) $i^3 =$

d) $i^4 =$

52) Simplify by rationalizing the denominator.

53) Simplify $(-4x^{-3})^3 x^5$

$$\frac{2 + i}{3 + 5i}$$

54) Solve for x . $x^2 + x - 12 = 0$

55) Solve $(3x - 4)(2x + 5) = 0$