

Student: _____
Date: _____
Time: _____

Instructor: Axia Administrator
Course: MAT/116
Book: Bittinger: Introductory and
Intermediate Algebra, 3e ENHANCED

Assignment: Week 9 Final test Part A

1. Translate to an algebraic expression.

The product of 26% and some number

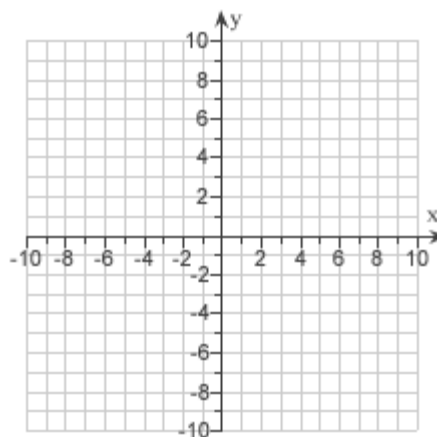
The translation is .

(Type the percentage as a decimal. Use n to represent some number.)

2. Use the intercepts to graph the equation.

$$x + 2y = 4$$

Use the graphing tool to graph the line.
Use the intercepts when drawing the line.
If only one intercept exists, use it and
another point to draw the line.



3. Use the distributive property to help you solve the equation.

$$8(w - 4) = -32$$

$$w = \text{$$

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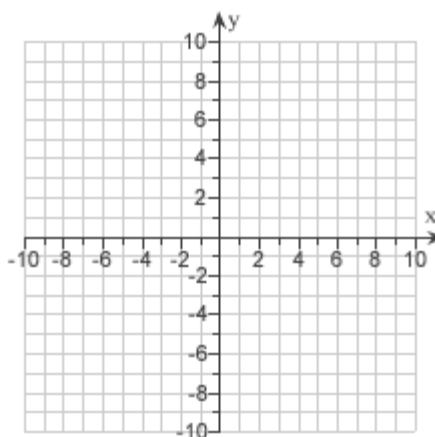
Assignment: Week 9 Final test Part A

4.

Graph the system of inequalities.

$$y \geq -3$$
$$x \geq 6$$

Use the graphing tool on the right to graph the system of inequalities.



5.

Find the slope and the y-intercept.

$$f(x) = -4x - 9$$

The slope is .

The y-intercept is $(0, \text{})$.

6.

Determine whether $(-4, 5)$ is a solution of $4x + 8y = 1$.

Is $(-4, 5)$ a solution to the equation?

- Yes
 No

7.

Find the slope, if it exists, of the line containing the pair of points.

$(4, 7)$ and $(8, -1)$

The slope $m = \text{}$.

(Simplify your answer. Type an integer or a fraction. Type N if the slope is undefined.)

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Assignment: Week 9 Final test Part A

8.

Find the domain of the function.

$$p(x) = x^2 - 2x + 3$$

What is the domain of p ?

- A. $\{x \mid x \text{ is a real number}\}$
- B. $\{x \mid x \neq 0\}$
- C. $\{x \mid x > 0\}$
- D. $\{x \mid x \neq 3\}$

9.

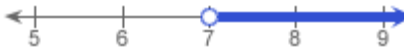



Solve. Then graph.

$$7x \geq 49$$

Choose the correct solution.

- A. $\{x \mid x > 7\}$
- B. $\{x \mid x < 7\}$
- C. $\{x \mid x \leq 7\}$
- D. $\{x \mid x \geq 7\}$

Choose the correct graph of the solution.

- A. 
- B. 
- C. 
- D. 

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Assignment: Week 9 Final test Part A

10.

Graph the line containing the given pair of points and find the slope.

$(2,4), (-6, -4)$

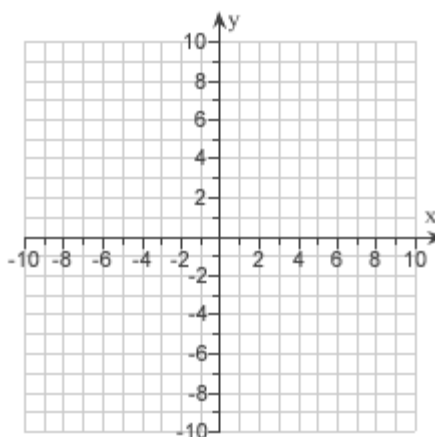
Use the graphing tool on the right to graph the line. Make sure to use the two given points when graphing the line.



Find the slope of the line.

$m =$

(Simplify your answer. Type an integer or a fraction. Type N if the slope is undefined.)



11.

Collect like terms.

$$15a + 3b - 9a - 7b$$

$$15a + 3b - 9a - 7b =$$

12.

Solve.

$$0.3x + 9 \leq 0.7x - 8$$

The solution is $\{x \mid x$.

(Simplify your answer. Type an inequality symbol; then type an integer or a decimal.)

13.

Solve.

$$-7 \leq 3x - 6 \leq -1$$

The solution is $\{x \mid$ $\leq x \leq$.

(Type an integer or a fraction.)

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Assignment: Week 9 Final test Part A

14.

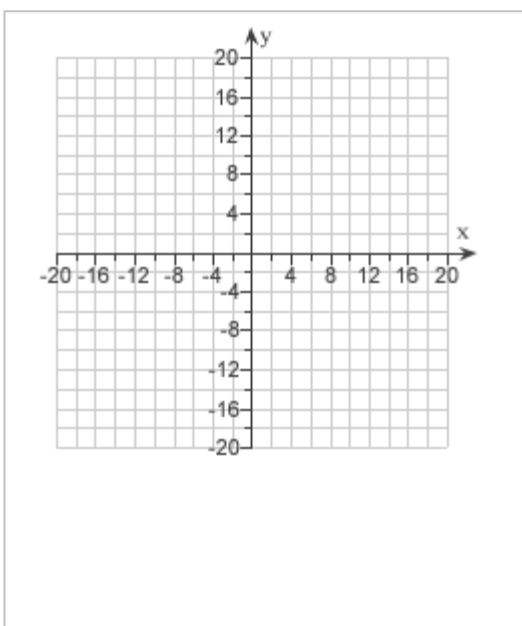
Graph the equation and identify the y-intercept.

$$y + x = -10$$

Use the graphing tool on the right to graph the equation.



The y-intercept is .
(Type an ordered pair.)



15.

Solve using the multiplication principle.
Don't forget to perform a check.

$$-\frac{1}{2}x = -\frac{7}{8}$$

The solution is .

(Simplify your answer. Type an integer or a fraction.)

16.

Solve using the addition and multiplication principles.

$$4 + 4x < 36$$

The solution set is $\{ x \mid x < \text{ } \}$.

(Type an inequality symbol, then type an integer or a fraction.)

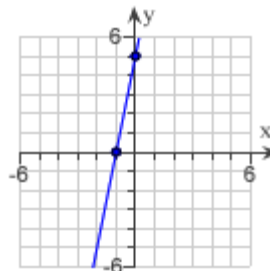
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Assignment: Week 9 Final test Part A

17.

Determine the slope of the line shown at the right.



Find the slope of the line.

$m = \square$

(Simplify your answer. Type an integer or a fraction. Type N if the slope is undefined.)

18.

Solve.

$5 > -3x + 4$ or $10 \leq -4x + 3$

Choose the solution to the inequality.

- A. $\left(-\frac{1}{3}, \infty\right)$
 B. $(-\infty, \infty)$
 C. $\left(-\infty, -\frac{7}{4}\right] \cup \left(-\frac{1}{3}, \infty\right)$
 D. $\left(-\infty, -\frac{7}{4}\right]$

19.

Simplify.

$5[-8 - (34 - 49)]$

$5[-8 - (34 - 49)] = \square$

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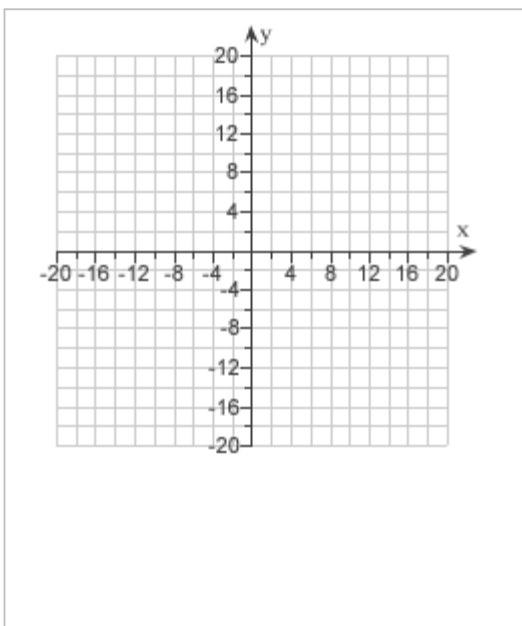
Assignment: Week 9 Final test Part A

20.

Graph the inequality on a plane.

$$2x + 3y \leq 6$$

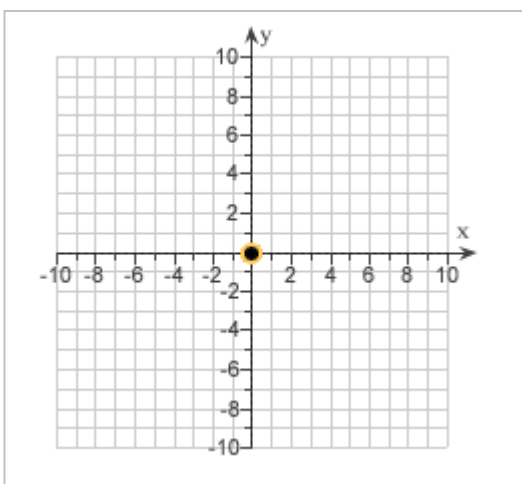
Use the graphing tool on the right to graph the inequality.



21.

Plot (0,5) on the coordinate axes.

Use the graph on the right to plot the point (0,5).



22.

Evaluate.

$$\frac{x+y}{8} \text{ for } x = 65 \text{ and } y = 7$$

$$\frac{x+y}{8} = \square$$

(Simplify your answer.)

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Assignment: Week 9 Final test Part A





23.

Solve. Then graph.

$$y - 8 > -20$$

The solution is $\{y \mid y > \square\}$.

Which of the following is the graph of the solution?

- A. 
- B. 
- C. 
- D. 

24.

Decide whether the pair of lines is parallel, perpendicular, or neither.

$$2x + 3y = 6$$
$$2x + 3y = 4$$

The lines are

- A. neither.
- B. perpendicular.
- C. parallel.

25.

Solve.

$$\frac{5}{2}x + \frac{1}{4}x = \frac{5}{4} + x$$

The solution is $x = \square$.

(Simplify your answer. Type an integer or a fraction.)

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Assignment: Week 9 Final test Part A

26.

Trains A and B are traveling in the same direction on parallel tracks. Train A is traveling at 40 miles per hour and train B is traveling at 60 miles per hour. Train A passes a station at 8:25 P.M. If train B passes the same station at 8:37 P.M., at what time will train B catch up to train A?

When will train B catch up with train A?

:

27.

Solve by the elimination method.

$$\begin{aligned} 3r - 7s &= -29 \\ 7r + 3s &= 29 \end{aligned}$$

What is the solution of the system?

(Type an ordered pair. Type an integer or a fraction. Type N if there is no solution. Type I if there are infinitely many solutions.)

28.

On three consecutive passes, a football team gains 8 yards, loses 15 yards, and gains 44 yards. What number represents the total net yardage?

The total net yardage is yards.

29.

Find the slope, if it exists.

$$x = -4$$

$$m = \text{$$

(Simplify your answer. Type an integer or a fraction. Type N if the slope is undefined.)

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Assignment: Week 9 Final test Part A

30.

Solve the system of equations by graphing. Then classify the system as consistent or inconsistent and as dependent or independent.

$$7x - 7y = -28$$

$$7y - 7x = 28$$

What is the solution of the system of equations?

- A. Infinitely many solutions
- B. A point
- C. No solution

Is the system consistent or inconsistent?

- Consistent
- Inconsistent

Are the equations dependent or independent?

- Dependent
- Independent

31.

Find the indicated outputs for $f(x) = 2x^2 - 4x$.

$$f(0) = \square$$

$$f(-1) = \square$$

$$f(2) = \square$$

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32.

In 1995, the life expectancy of males in a certain country was 72.4 years. In 2001, it was 74.9 years. Let E represent the life expectancy in year t and let t represent the number of years since 1995.

The linear function $E(t)$ that fits the data is

$$E(t) = \square t + \square.$$

(Round to the nearest tenth.)

Use the function to predict the life expectancy of males in 2006.

$$E(11) = \square$$

(Round to the nearest tenth.)

33.

Soybean meal is 18% protein; cornmeal is 9% protein. How many pounds of each should be mixed together in order to get 360-lb mixture that is 13% protein?

How many pounds of the cornmeal should be in the mixture?

pounds

How many pounds of the soybean meal should be in the mixture?

pounds

34.

Find the domain of the function.

$$g(x) = \frac{2}{8 - 3x}$$

Choose the correct domain below.

A. $\{x \mid x \neq 0\}$

B. $\{x \mid x \neq 2\}$

C. $\left\{x \mid x \neq \frac{8}{3}\right\}$

D. $\left\{x \mid x \geq \frac{8}{3}\right\}$

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Assignment: Week 9 Final test Part A

35.

The width of a rectangle is fixed at 27 cm. What lengths will make the perimeter greater than 96 cm?

The length must be greater than cm.

36.

Use < or > to make the statement true.

- 17 12

- 17 12

37.

Solve the following system of equations.

$$x + 3y = 2 \quad (1)$$

$$x = 9 - 3y \quad (2)$$

What is the solution of the system?

(Type an ordered pair. Type N if there is no solution.)

38.

Solve using the multiplication principle.
Don't forget to perform a check.

$$9x = -81$$

The solution is $x =$.

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Assignment: Week 9 Final test Part A

39.

The equation $y = -1777x + 27,153$ can be used to predict the number y of gun deaths in the United States x years after 2000, that is, $x = 0$ corresponds to 2000, $x = 3$ corresponds to 2003, $x = 4$ corresponds to 2004, and so on. Predict the number of gun deaths in 2004 and 2009. In what year will the number of gun deaths be 7606?

The predicted gun deaths in 2004 will be .

The predicted gun deaths in 2009 will be .

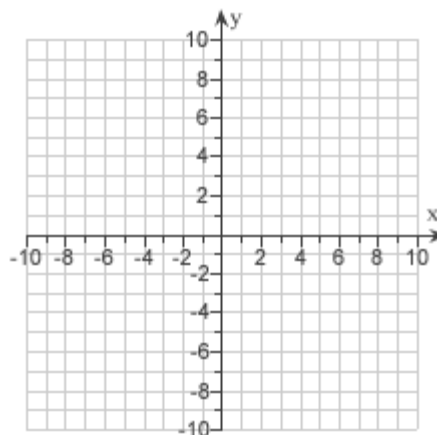
The predicted number of gun deaths will be 7606 in the year .

40.

Graph the equation.

$$y = 6$$

Use the graphing tool on the right to graph the equation.



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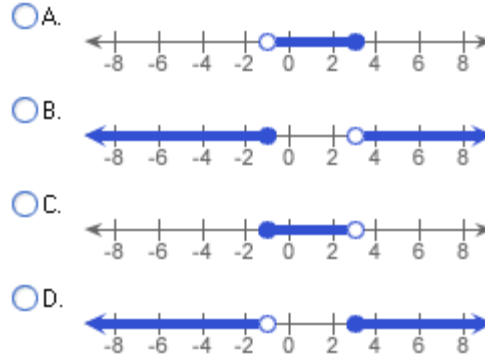
Assignment: Week 9 Final test Part A

41.

Graph on a number line, where x is a real number.

$$-1 < x \leq 3$$

Choose the graph of $-1 < x \leq 3$.



42.

50% of what number is 40?

The answer is .

43.

Multiply.

$$-\frac{5}{9} \cdot \left(\frac{6}{5}\right)$$

$$-\frac{5}{9} \cdot \left(\frac{6}{5}\right) = \square$$

(Type an integer or a simplified fraction.)

44.

Solve by the elimination method.

$$4x + 5y = 5$$

$$8x + 10y = 10$$

What is the solution of the system?

(Type an ordered pair. Type an integer or a fraction. Type N if there is no solution. Type I if there are infinitely many solutions.)

45.

Solve.

$$8x - (5x + 4) = 5$$

The solution is $x =$.

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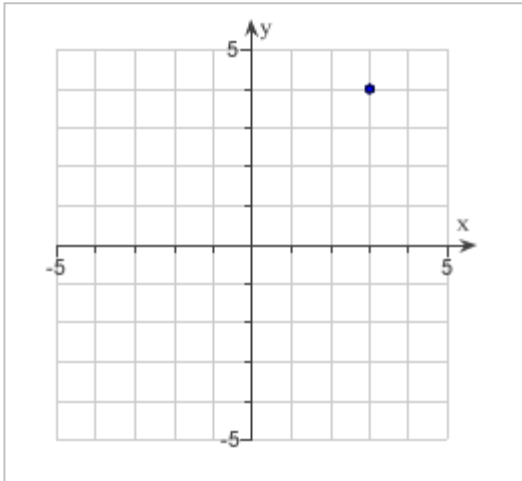
Assignment: Week 9 Final test Part A

46.

Find the coordinates of the point shown on the graph.

What are the coordinates of the point?

(Type an ordered pair.)



47.

The function H described by $H(x) = 2.75x + 71.48$ can be used to predict the height, in centimeters, of a woman whose humerus (the bone from the elbow to the shoulder) is x cm long.

Predict the height of a woman whose humerus is 38 cm long.

The predicted height of a woman whose humerus is 38 cm long is cm.

48.

Solve by the substitution method.

$$\begin{aligned} 3x + 7y &= 10 \\ x &= 18 - 6y \end{aligned}$$

What is the solution of the system?

(Type an ordered pair. Type N if there is no solution.)

49.

Amy paid \$71.04 for a pair of running shoes during a 30%-off sale. What was the regular price?

The regular price was \$.

(Round to the nearest cent, if necessary.)

50.

Solve.

$$-0.2x < -4$$

The solution is $\{x \mid \text{}\}$.

(Type an inequality.)

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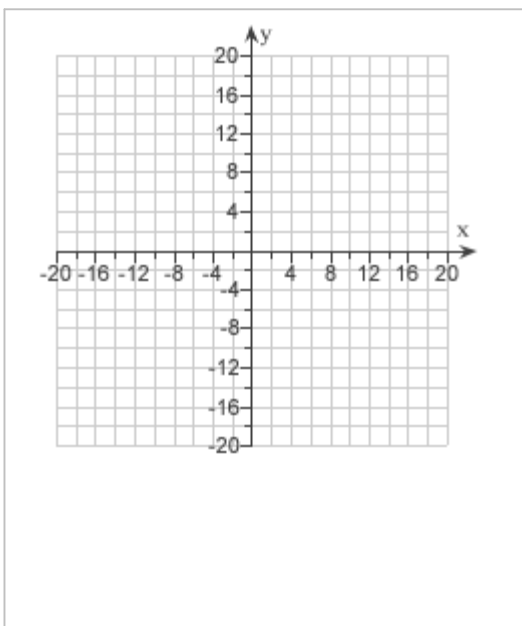
Assignment: Week 9 Final test Part A

51.

Graph the equation using the slope and the y-intercept.

$$y = \frac{6}{5}x + 3$$

Use the graphing tool to graph the line. Use the slope and y-intercept when drawing the line.



52.

Solve using the multiplication principle.

$$-2x > \frac{1}{9}$$

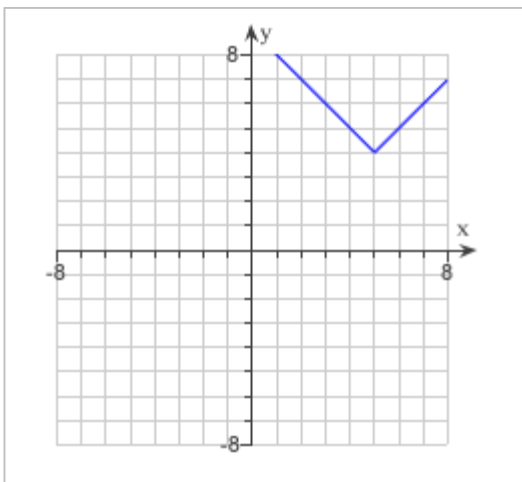
The solution set is $\{x \mid x \square \square\}$.
(Type an inequality symbol and a fraction.)

53.

Determine if the graph is a function.

Is this the graph of a function?

- No
 Yes



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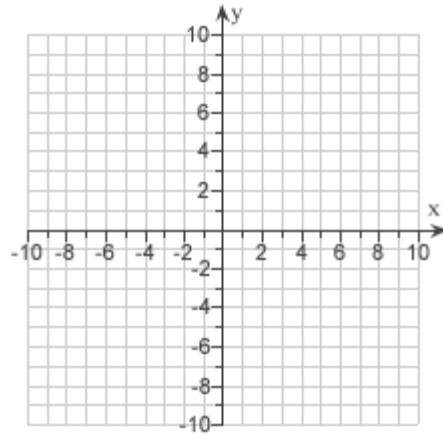
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54.

Use the intercepts to graph the equation.

$$x + 2y = 4$$

Use the graphing tool to graph the line.
Use the intercepts when drawing the line.
If only one intercept exists, use it and
another point to draw the line.



55.

Solve for the indicated letter.

$$c = 2d, \text{ for } d$$

The solution is $d = \square$.

56.

Media Services charges \$30 for a phone and \$20/month for its economy plan. The equation $c = 20t + 30$ describes the total cost, c , of operating a Media Services phone for t months.

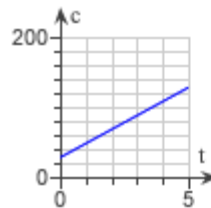
The total cost for 7 months of service is \$ \square .

If a customer has only \$80 available, how many months of service can she receive?

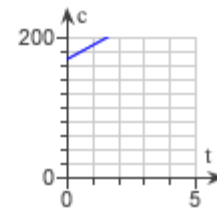
- A. $2\frac{1}{3}$ B. 2 C. 3 D. $2\frac{1}{2}$

Choose the correct graph of the equation $c = 20t + 30$.

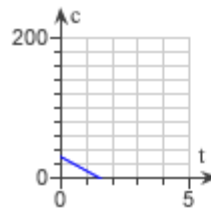
A.



B.



C.



D.

