

Student: _____**Instructor:** Alfredo Alvarez**Assignment:** Math**Date:** _____**Course:** Math 0410 / 0320 Alvarez

0410SPRINGBREAK33Q

1. Simplify.

$$(-17 - 43) \div 15 - 26$$

$$(-17 - 43) \div 15 - 26 = \boxed{}$$

Answer: -30

2. Solve the equation.

$$5(y - 3) = 2y - 15$$

$$y = \boxed{}$$

Answer: 0

3. Solve the equation.

$$7(6x - 3) = 43x$$

$$x = \boxed{}$$

Answer: -21

4. Subtract.

$$\frac{1}{8} - \frac{5}{12}$$

$$\frac{1}{8} - \frac{5}{12} = \boxed{} \text{ (Type an integer or a fraction.)}$$

Answer: $-\frac{7}{24}$

5. Solve the equation.

$$\frac{m}{3} + 5 = \frac{8}{3}$$

$$m = \boxed{} \text{ (Type an integer or a fraction. Simplify your answer.)}$$

Answer: -7

6. Solve.

$$1.8x - 23 = 1.3x + 8$$

x = (Type an integer or a decimal.)

Answer: 62

7. A stereo normally priced at \$469 is on sale for 30% off. Find the discount and the sale price.

The discount is \$.

The sale price is \$.

Answers 140.70

328.30

8. A company borrows \$96,000 for 3 years at a simple interest rate of 13.5%. Find the interest paid on the loan and the total amount paid.

The interest paid on the loan is \$.

The total amount paid is \$.

Answers 38,880

134,880

9. Solve the equation for x.

$$4(3x - 2) = 12x - 8$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. x = _____ (Type an integer or a fraction. Simplify your answer.)

B. The solution is all real numbers.

C. There is no solution.

Answer: B. The solution is all real numbers.

10. Solve the equation.

$$\frac{x}{4} + 4 = \frac{x}{4}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. $x =$ _____
- B. The solution is all real numbers.
- C. There is no solution.

Answer: C. There is no solution.

11. Solve the equation for y .

$$2x + y = 8$$

$y =$

Answer: $8 - 2x$

12. Solve the inequality.

$$-4x + 2 \geq 2(4 - x)$$

The solution set is . (Type your answer in interval notation.)

Answer: $(-\infty, -3]$

13.

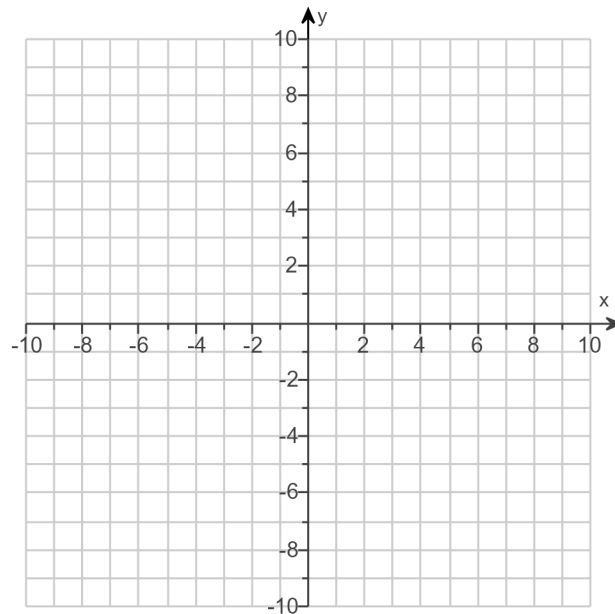
For the following equation, find three ordered pair solutions by completing the table. Then use the ordered pairs to graph the equation.

$$y = 8x$$

Find three ordered pair solutions of the given equation.

x	y
0	<input type="text"/>
-1	<input type="text"/>
1	<input type="text"/>

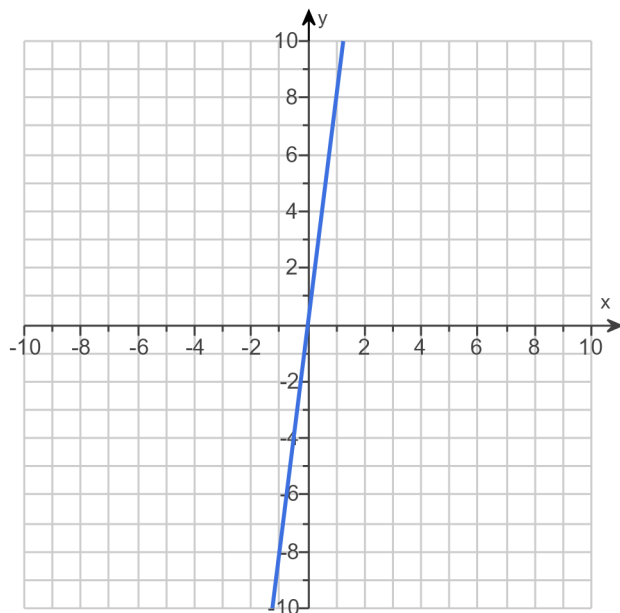
Use the graphing tool to graph the line.



Answers 0

- 8

8



14.

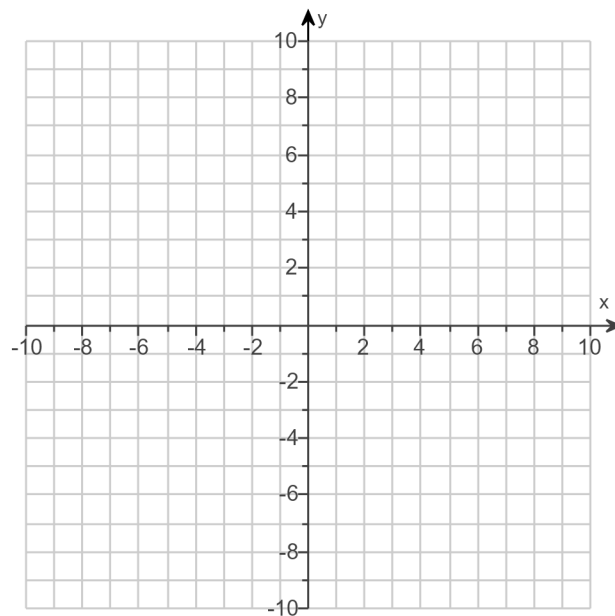
For the following equation, find three ordered pair solutions by completing the table. Then use the ordered pairs to graph the equation.

$$y = -2x + 4$$

Find three ordered pair solutions of the given equation.

x	y
0	<input type="text"/>
1	<input type="text"/>
2	<input type="text"/>

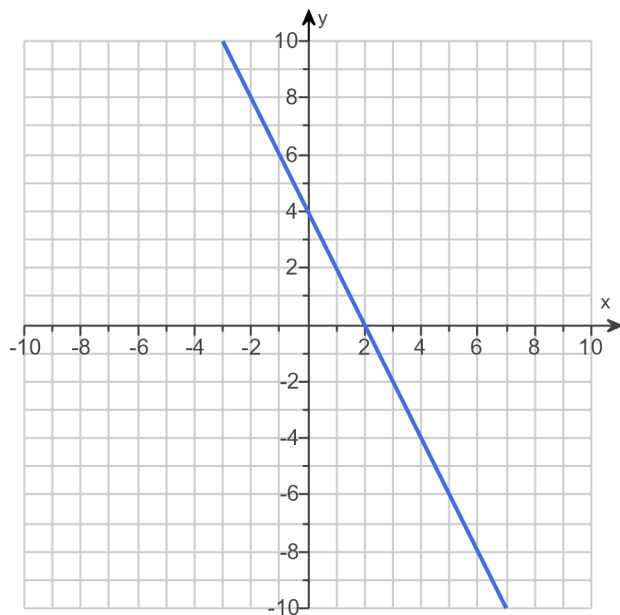
Use the graphing tool to graph the line.



Answers 4

2

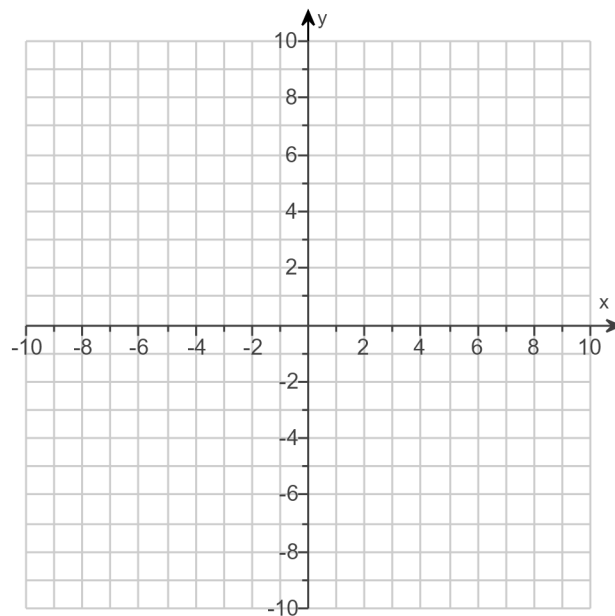
0



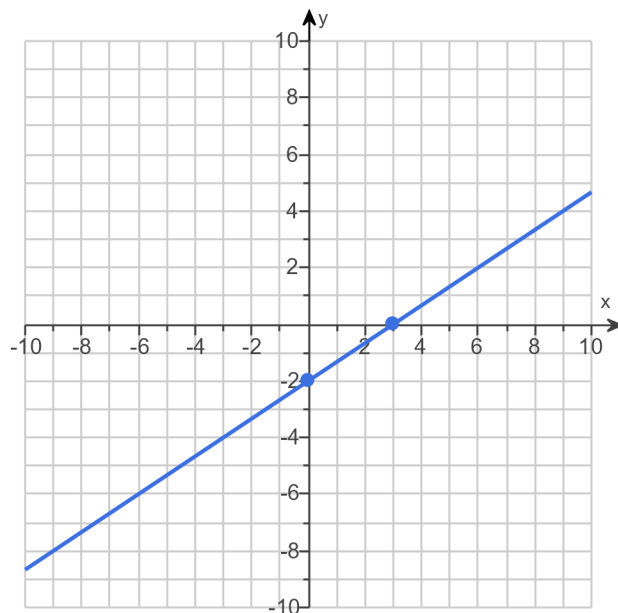
15. Plot the intercepts to graph the equation.

$$2x - 3y = 6$$

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



Answer:



16. Find the slope of the line that goes through the given points.

$$(2, -1) \text{ and } (8, 10)$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. The slope is _____ . (Simplify your answer.)
- B. The slope is undefined.

Answer: A. The slope is . (Simplify your answer.)

17. Find the slope of the line.

$$2x + y = 4$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. The slope is _____. (Simplify your answer. Type an integer or a fraction.)
- B. The slope is undefined.

Answer: A. The slope is . (Simplify your answer. Type an integer or a fraction.)

18. Find the slope of the line.

$$8x - 5y = 40$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. The slope of the line is _____. (Simplify your answer.)
- B. The slope of the line is undefined.

Answer: A. The slope of the line is . (Simplify your answer.)

19. Determine whether the pair of lines are parallel, perpendicular, or neither.

$$y = \frac{7}{6}x + 5$$

$$y = -\frac{7}{6}x$$

Choose the correct answer below.

- A. Parallel
- B. Neither
- C. Perpendicular

Answer: B. Neither

20. Find the slope-intercept form of the line whose slope is 5 and that passes through the point $(-5, 7)$.

The equation of the line is .
(Type your answer in slope-intercept form.)

Answer: $y = 5x + 32$

21. Determine whether each ordered pair is a solution of the system of linear equations.

$$\begin{cases} 2x - y = 4 \\ x + 9y = 21 \end{cases}$$

a. (3,2)

b. (5,6)

a. Is (3,2) a solution?

No

Yes

b. Is (5,6) a solution?

Yes

No

Answers Yes

No

22. Solve the system of equations by the addition method.

$$\begin{cases} 6x + y = 20 \\ 4x - y = 10 \end{cases}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. The solution is _____. (Simplify your answer. Type an ordered pair.)

B. There are infinitely many solutions; $\{(x,y)|6x + y = 20\}$ or $\{(x,y)|4x - y = 10\}$.

C. There is no solution; $\{\}$ or \emptyset .

Answer: A. The solution is . (Simplify your answer. Type an ordered pair.)

23. Solve the system of equations by the addition method.

$$\begin{cases} x + 4y = -2 \\ 2x + 5y = -7 \end{cases}$$

Select the correct choice below and, if necessary, fill in the answer box within your choice.

A. The solution is _____. (Simplify your answer. Type an ordered pair.)

B. There are infinitely many solutions; $\{(x,y)|x + 4y = -2\}$ or $\{(x,y)|2x + 5y = -7\}$.

C. There is no solution; $\{\}$ or \emptyset .

Answer: A. The solution is . (Simplify your answer. Type an ordered pair.)

24. If $P(x) = x^2 + x + 3$, find $P(8)$.

$$P(8) = \boxed{}$$

Answer: 75

25. Subtract.

$$(5y^2 + 4y - 3) - (-2y + 2)$$

$$(5y^2 + 4y - 3) - (-2y + 2) = \boxed{} \text{ (Simplify your answer.)}$$

Answer: $5y^2 + 6y - 5$

26. Add.

$$(-6y^2 - 6y) + (4y^2 + 2y - 7)$$

$$(-6y^2 - 6y) + (4y^2 + 2y - 7) = \boxed{} \text{ (Do not factor.)}$$

Answer: $-2y^2 - 4y - 7$

27. Find the following product.

$$(2y - 4)^2$$

$$(2y - 4)^2 = \boxed{}$$

Answer: $4y^2 - 16y + 16$

28. Multiply.

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

$$(5x - 5)(4x + 5) = \boxed{} \text{ (Simplify your answer.)}$$

Answer: $20x^2 + 5x - 25$

29. Multiply.

$$(x + 3)(x^3 - 5x + 7)$$

$$(x + 3)(x^3 - 5x + 7) = \boxed{}$$

Answer: $x^4 + 3x^3 - 5x^2 - 8x + 21$

30. Find the following product.

$$(5a + 7)(9a^2 - 4a - 4)$$

$$(5a + 7)(9a^2 - 4a - 4) = \boxed{}$$

Answer: $45a^3 + 43a^2 - 48a - 28$

31. Multiply.

$$(2c + d)(2c - d)$$

$$(2c + d)(2c - d) = \boxed{} \text{ (Simplify your answer.)}$$

Answer: $4c^2 - d^2$

32. Simplify the expression. Write the result using positive exponents only.

$$\left(\frac{x^{-3}y^3}{x^3y^{10}} \right)^2$$

$$\left(\frac{x^{-3}y^3}{x^3y^{10}} \right)^2 = \boxed{}$$

(Simplify your answer. Use positive exponents only.)

Answer: $\frac{1}{x^{12}y^{14}}$

33. Divide using synthetic division.

$$(6x^2 + 11x + 11) \div (x + 1)$$

$$(6x^2 + 11x + 11) \div (x + 1) = \boxed{}$$

Answer: $6x + 5 + \frac{6}{x + 1}$