

Name _____

math0410 Exam #3 04041700aafm041024350m

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SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Solve the equation.

1) $2(5x - 2) = 8x$

1) _____

m50-5
2) $1.1x + 4.3 = 0.7x + 1.14$

2) _____

m50-8
3) $\frac{5}{6}x + \frac{4}{3} = \frac{2}{3}x$

3) _____

m50-15
4) $9x + 5 - 9x - 5 = 6x - 6x - 3$

4) _____

m50-16
5) $2(x + 5) = (2x + 10)$

5) _____

Solve the equation for the indicated variable.

6) $A = P + PRT$ for T

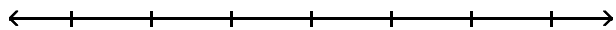
6) _____

m50-18

Solve the inequality. Graph the solution set and write it in interval notation.

7) $21x + 9 > 3(6x + 4)$

7) _____



m50-19

Determine whether the ordered pair is a solution of the given linear equation.

8) $-2y + 3x = -15$; (5, 0)

8) _____

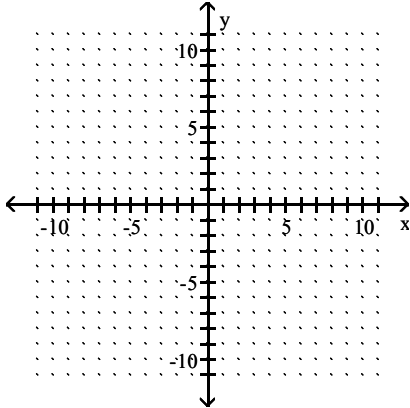
m50-20

Find three ordered pair solutions by completing the table. Then use the ordered pairs to graph the equation.

9) $y = 2x + 4$

9) _____

x	y
0	
1	
-1	

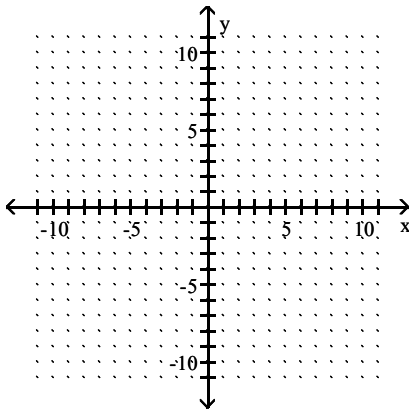


m50-21

Graph the linear equation.

10) $5y - 25x = 10$

10) _____



m50-22

Find the slope of the line that passes through the given points.

11) (8, 5) and (6, 9)

11) _____

m50-23

Find an equation of the line described. Write the equation in slope -intercept form if possible.

12) Slope 2, through (5, 2)

12) _____

m50-24

Evaluate the function.

13) Find $f(4)$ when $f(x) = x^2 + 4x - 3$.

13) _____

m50-25

Solve the system of equations by the addition method.

14)
$$\begin{cases} -2x + 3y = 2 \\ -3x + 5y = 2 \end{cases}$$

14) _____

m50-26

15)
$$\begin{cases} x + y = 7 \\ x + y = 4 \end{cases}$$

15) _____

m50-27

$$16) \begin{cases} -2x + 2y = -5 \\ 6x - 6y = 15 \end{cases}$$

16) _____

m50-28

Multiply vertically.

$$17) (6x - 1)(x^2 - 4x + 1)$$

17) _____

m50-33

Multiply.

$$18) (3a - 7)^2$$

18) _____

m50-34

$$19) (x + 11)(x - 11)$$

19) _____

m50-35

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

$$20) \frac{2^{-7}x^{-5}y^3}{2^{-4}x^{-8}y^6}$$

20) _____

m50-36

Find the quotient using long division.

$$21) \frac{x^2 + 9x + 6}{x + 2}$$

21) _____

m50-38

Factor out the GCF from the polynomial.

22) $20x^4y + 36xy^3$

22) _____

m50-39

Factor the four-term polynomial by grouping.

23) $3xy - 9x + 7y - 21$

23) _____

m50-40

Factor the trinomial completely. If the polynomial cannot be factored, write "prime."

24) $x^2 - x - 42$

24) _____

m50-41

Factor the binomial completely.

25) $z^2 - 121$

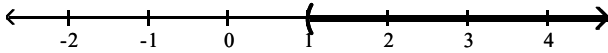
25) _____

m50-44

Answer Key

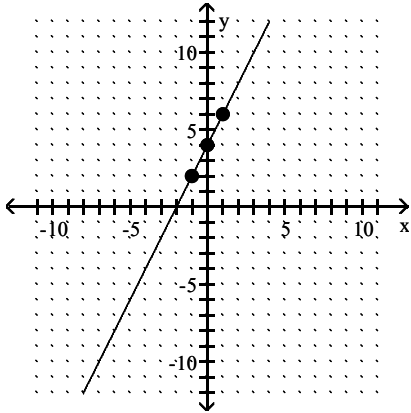
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- 1) 2
- 2) -7.9
- 3) -8
- 4) no solution
- 5) all real numbers
- 6) $T = \frac{A - P}{PR}$
- 7) $(1, \infty)$

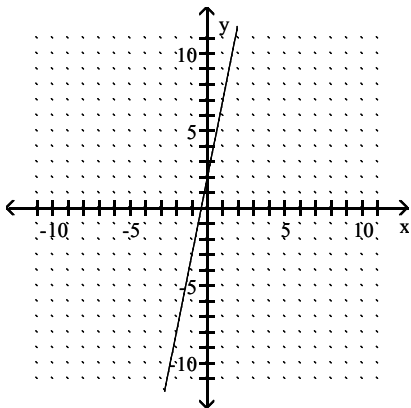


- 8) no
- 9)

x	y
0	4
1	6
-1	2



10)



- 11) - 2
- 12) $y = 2x - 8$
- 13) 29
- 14) $(-4, -2)$
- 15) no solution
- 16) infinite number of solutions
- 17) $6x^3 - 25x^2 + 10x - 1$

Answer Key

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18) $9a^2 - 42a + 49$

19) $x^2 - 121$

20) $\frac{x^3}{8y^3}$

21) $x + 7 - \frac{8}{x + 2}$

22) $4xy(5x^3 + 9y^2)$

23) $(3x + 7)(y - 3)$

24) $(x + 6)(x - 7)$

25) $(z + 11)(z - 11)$