Exam #3

Name_____

math0410 Exam #3 04041700aafm041024350m

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MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Solve the equation.

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

A) 2 B) –2 C) –1 D) 1

Objective: (3.2) Use Both Properties to Solve Equations
m50–5

2) $1.1x + 4.3 = 0.7x + 1.14$ 2) _____

A) –7.9 B) –7.8 C) 0.127 D) –7.11

Objective: (5.6) Solve Equations Containing Decimals
m50–8

3) $\frac{5}{6}x + \frac{4}{3} = \frac{2}{3}x$ 3) _____

A) –8 B) 8 C) –12 D) 12

Objective: (9.3) Solve Equations Containing Fractions or Decimals
m50–15

4) $9x + 5 - 9x - 5 = 6x - 6x - 3$ 4) _____

A) 0 B) –288
C) all real numbers D) no solution

Objective: (9.3) Recognize Identities and Equations with No Solution
m50–16

5) $2(x + 5) = (2x + 10)$ 5) _____

A) 20 B) 0
C) all real numbers D) no solution

Objective: (9.3) Recognize Identities and Equations with No Solution
m50–17

Solve the equation for the indicated variable.

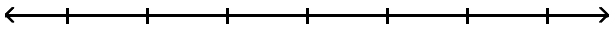
6) $A = P + PRT$ for T 6) _____

A) $T = \frac{A - P}{PR}$ B) $T = \frac{P - A}{PR}$ C) $T = \frac{A}{R}$ D) $T = \frac{PR}{A - P}$

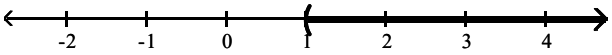
Objective: (9.5) Solve a Formula or Equation for One of Its Variables
m50–18

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

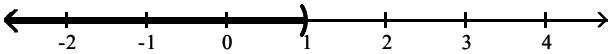
7) $21x + 9 > 3(6x + 4)$ 7) _____



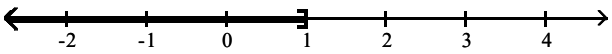
A) (1, ∞)



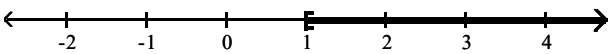
B) (−∞, 1)



C) (−∞, 1]



D) [1, ∞)



Objective: (9.6) Use Both Properties to Solve Inequalities
m50–19

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

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

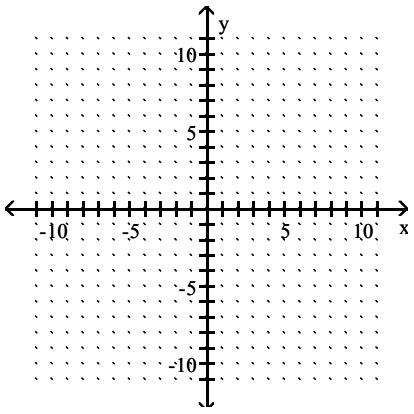
A) no B) yes

Objective: (10.1) Determine whether an ordered pair is a solution of an equation in two variables.
m50–20

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

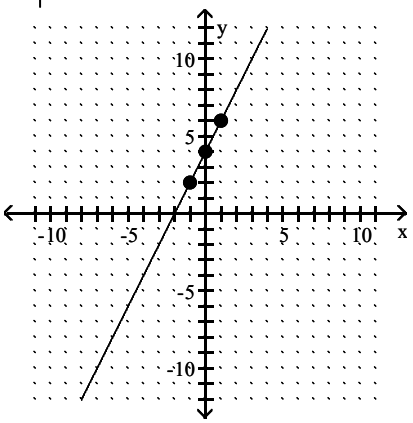
9) $y = 2x + 4$ 9) _____

x	y
0	
1	
−1	



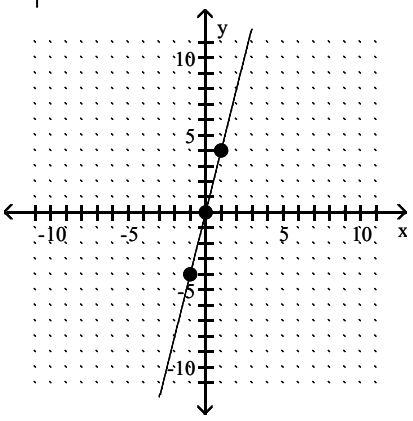
A)

x	y
0	4
1	6
−1	2



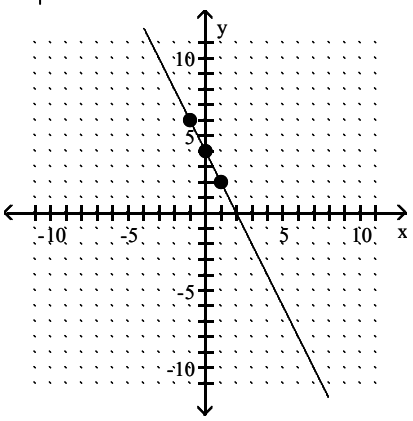
B)

x	y
0	0
1	4
−1	−4



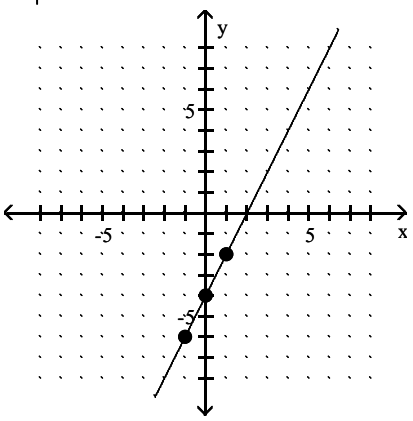
C)

x	y
0	4
1	2
−1	6



D)

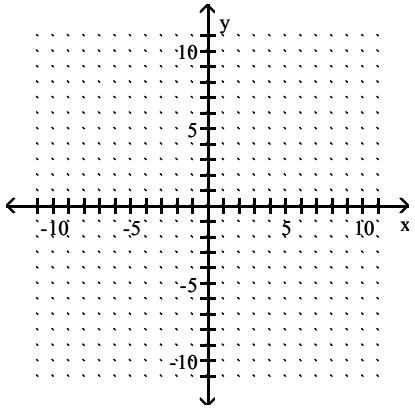
x	y
0	−4
1	−2
−1	−6



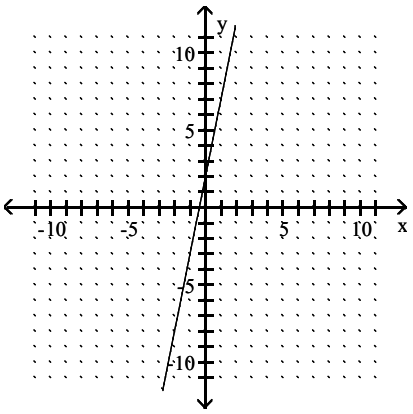
Objective: (10.2) Graph a linear equation by finding and plotting ordered pair solutions.
m50–21

Graph the linear equation.

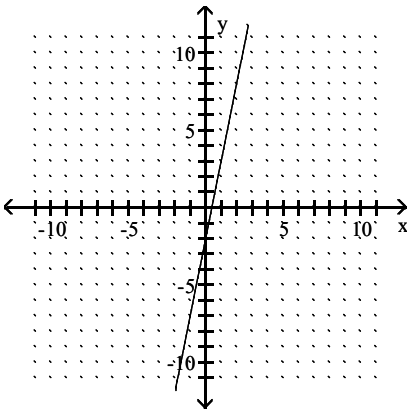
10) $5y - 25x = 10$ 10) _____



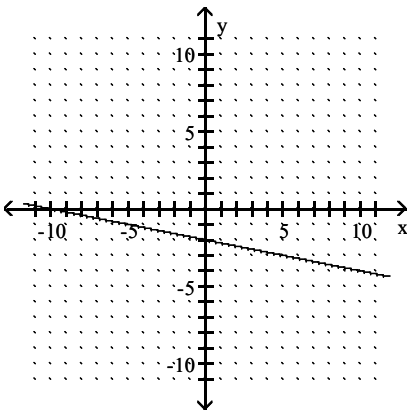
A)



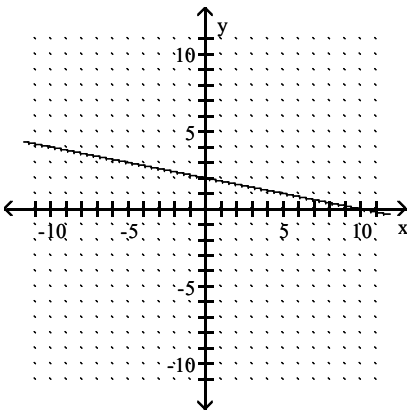
B)



C)



D)



Objective: (10.2) Graph a linear equation by finding and plotting ordered pair solutions.
m50–22

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

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

A) – 2 B) $-\frac{1}{2}$ C) 1 D) 2

Objective: (10.4) Find the slope of a line given two points of the line.
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) _____

A) $y = 2x - 8$ B) $y = 2x + 8$ C) $x = 2y - 8$ D) $x = 2y + 8$

Objective: (10.5) Use the point–slope form to find an equation of a line given its slope and a point of the line.
m50–24

Evaluate the function.

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

A) 29 B) 35 C) 3 D) –3

Objective: (10.6) Use function notation.
m50–25

Solve the system of equations by the addition method.

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

A) (– 4, – 2) B) (– 2, – 4)
C) infinite number of solutions D) no solution

Objective: (11.3) Use the addition method to solve a system of linear equations.
m50–26

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

A) no solution B) (0, 0) C) (7, 4) D) (0, 11)

Objective: (11.3) Use the addition method to solve a system of linear equations.
m50–27

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

A) infinite number of solutions B) (0, 0)
C) (–2, 2) D) no solution

Objective: (11.3) Use the addition method to solve a system of linear equations.
m50–28

Multiply vertically.

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

A) $6x^3 - 23x^2 + 2x - 1$ B) $6x^3 - 25x^2 + 10x - 1$
C) $6x^3 - 24x^2 + 6x + 1$ D) $6x^3 + 25x^2 - 10x + 1$

Objective: (12.3) Multiply polynomials vertically.
m50–33

Multiply.

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

A) $9a^2 - 42a + 49$ B) $9a^2 + 49$ C) $3a^2 - 42a + 49$ D) $3a^2 + 49$

Objective: (12.4) Square a binomial.
m50–34

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

A) $x^2 - 121$ B) $x^2 - 22$ C) $x^2 - 22x - 121$ D) $x^2 + 22x - 121$

Objective: (12.4) Multiply the sum and difference of two terms.
m50–35

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

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

A) $\dfrac{x^3}{8y^3}$ B) $\dfrac{1}{8x^8y^3}$ C) $\dfrac{3x^3}{y^3}$ D) $\dfrac{8}{x^3y^3}$

Objective: (12.5) Use all the rules and definitions for exponents to simplify exponential expressions.
m50–36

Find the quotient using long division.

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

A) $x + 7 - \dfrac{8}{x + 2}$ B) $x + 7 + \dfrac{8}{x + 2}$ C) $\dfrac{x + 7}{x + 2}$ D) $x + 8$

Objective: (12.6) Use long division to divide a polynomial by another polynomial.
m50–38

Factor out the GCF from the polynomial.

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

A) $4x(5x^3y + 9y^3)$ B) $4y(5x^4 + 9xy^2)$ C) $4xy(5x^3 + 9y^2)$ D) $xy(20x^3 + 36y^2)$

Objective: (13.1) Factor out the greatest common factor from a polynomial.
m50–39

Factor the four–term polynomial by grouping.

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

A) $(3x + 7)(y - 3)$ B) $(3x - 3)(y + 7)$ C) $(3x + 7y)(y - 3)$ D) $(3x + y)(7y - 3)$

Objective: (13.1) Factor a polynomial by grouping.
m50–40

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

24) $x^2 - x - 42$ 24) _____

A) $(x + 7)(x - 6)$ B) prime C) $(x + 6)(x - 7)$ D) $(x + 1)(x - 42)$

Objective: (13.2) Factor trinomials of the form x^2 + bx + c.
m50–41

Factor the binomial completely.

25) $z^2 - 121$ 25) _____

A) prime B) $(z - 11)^2$ C) $(z + 11)(z - 11)$ D) $(z + 11)^2$

Objective: (13.5) Factor the difference of two squares.
m50–44

Answer Key
Testname: AAFM041024350MT3

1) A
2) A
3) A
4) D
5) C
6) A
7) A
8) A
9) A
10) A
11) A
12) A
13) A
14) A
15) A
16) A
17) B
18) A
19) A
20) A
21) A
22) C
23) A
24) C
25) C