

Exam

Name _____

final exam for math0410 practice

03201700aafinm041024344w mg

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

Simplify.

1) $\frac{193 + 7}{3^2 - 4}$

1) _____

Solve the equation.

2) $f + 1 = -2$

2) _____

Simplify the expression.

3) $2(4x + 2) + 3(x + 4)$

3) _____

Solve the equation.

4) $5x + 4 = 49$

4) _____

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

5) _____

6) $5x - 6 = 2x - 30$

6) _____

Solve.

7) $\frac{x}{5} = \frac{x}{6} + \frac{2}{5}$

7) _____

Solve the equation.

8) $1.1x + 4.3 = 0.7x + 1.14$

8) _____

Find the median. If necessary, round to one decimal place.

9) 4, 6, 25, 23, 43, 47

9) _____

Translate to an equation and solve.

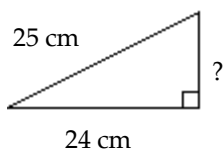
10) 19 is 4% of what number?

10) _____

Find the unknown length in the right triangle. If necessary, approximate the length to the nearest thousandth.

11)

11) _____

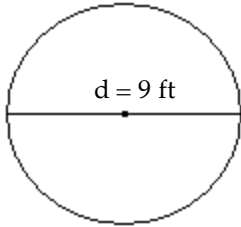


Find the probability of the event if a single choice is made from a bag.

- 12) A bag contains 7 red marbles, 2 blue marbles, and 1 green marble. What is the probability of choosing a marble that is not blue when one marble is drawn from the bag? 12) _____

Find the area of the geometric figure.

- 13) 13) _____



Use 3.14 for π .

Solve the equation.

- 14) $8x - (4x - 1) = 2$ 14) _____

- 15) $\frac{5}{6}x + \frac{4}{3} = \frac{2}{3}x$ 15) _____

- 16) $9x + 5 - 9x - 5 = 6x - 6x - 3$ 16) _____

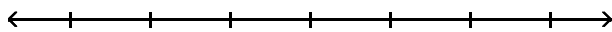
- 17) $2(x + 5) = (2x + 10)$ 17) _____

Solve the equation for the indicated variable.

- 18) $A = P + PRT$ for T 18) _____

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

- 19) $21x + 9 > 3(6x + 4)$ 19) _____



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

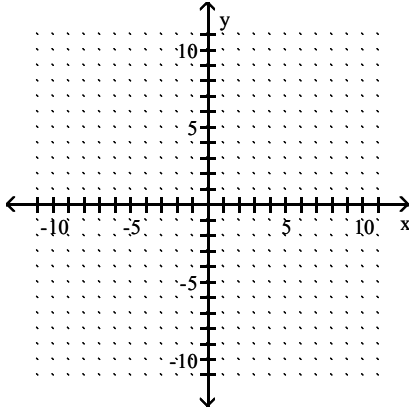
- 20) $-2y + 3x = -15$; (5, 0) 20) _____

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

21) $y = 2x + 4$

21) _____

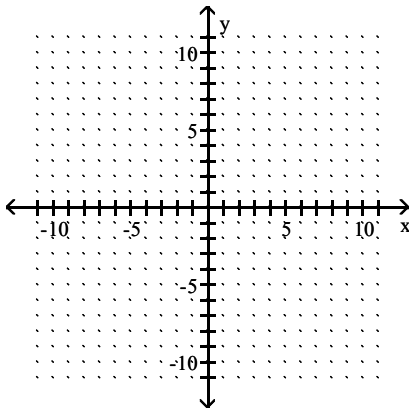
| x | y |
|----|---|
| 0 | |
| 1 | |
| -1 | |



Graph the linear equation.

22) $5y - 25x = 10$

22) _____



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

23) (8, 5) and (6, 9)

23) _____

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

24) Slope 2, through (5, 2)

24) _____

Evaluate the function.

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

25) _____

Solve the system of equations by the addition method.

26)
$$\begin{cases} -2x + 3y = 2 \\ -3x + 5y = 2 \end{cases}$$

26) _____

27)
$$\begin{cases} x + y = 7 \\ x + y = 4 \end{cases}$$

27) _____

$$28) \begin{cases} -2x + 2y = -5 \\ 6x - 6y = 15 \end{cases}$$

28) _____

Perform the indicated operation.

$$29) (14x + 5) - (-13x^2 - 7x + 5)$$

29) _____

Multiply.

$$30) 6x^2(-2x^2 + 2x + 6)$$

30) _____

$$31) (a + 8)(a + 1)$$

31) _____

$$32) (b - 5)(b^2 + 5b + 3)$$

32) _____

Multiply vertically.

$$33) (6x - 1)(x^2 - 4x + 1)$$

33) _____

Multiply.

$$34) (3a - 7)^2$$

34) _____

$$35) (x + 11)(x - 11)$$

35) _____

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

$$36) \frac{2^{-7}x^{-5}y^3}{2^{-4}x^{-8}y^6}$$

36) _____

Find the quotient using long division.

$$37) \frac{5m^2 + 5m - 10}{m + 2}$$

37) _____

$$38) \frac{x^2 + 9x + 6}{x + 2}$$

38) _____

Factor out the GCF from the polynomial.

$$39) 20x^4y + 36xy^3$$

39) _____

Factor the four-term polynomial by grouping.

$$40) 3xy - 9x + 7y - 21$$

40) _____

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

$$41) x^2 - x - 42$$

41) _____

$$42) u^2 - 3uv - 28v^2$$

42) _____

43) $x^2 + 3xy - 18y^2$

43) _____

Factor the binomial completely.

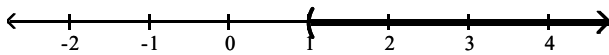
44) $z^2 - 121$

44) _____

Answer Key

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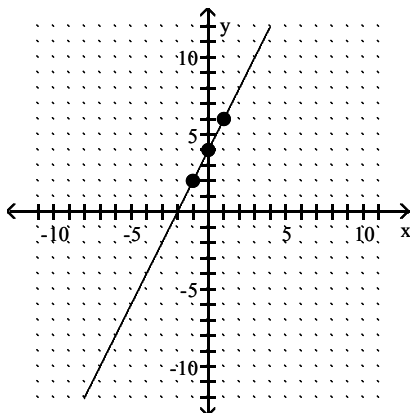
- 1) 40
- 2) -3
- 3) $11x + 16$
- 4) 9
- 5) 2
- 6) -8
- 7) 12
- 8) -7.9
- 9) 24
- 10) 475
- 11) 7 cm
- 12) $\frac{4}{5}$
- 13) 63.585 sq ft
- 14) $\frac{1}{4}$
- 15) -8
- 16) no solution
- 17) all real numbers
- 18) $T = \frac{A - P}{PR}$
- 19) $(1, \infty)$



20) no

21)

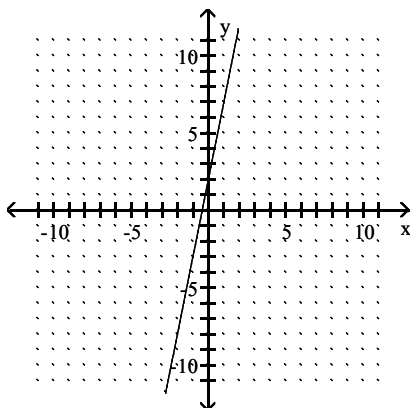
| x | y |
|----|---|
| 0 | 4 |
| 1 | 6 |
| -1 | 2 |



Answer Key

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22)



23) -2

24) $y = 2x - 8$

25) 29

26) $(-4, -2)$

27) no solution

28) infinite number of solutions

29) $13x^2 + 21x$

30) $-12x^4 + 12x^3 + 36x^2$

31) $a^2 + 9a + 8$

32) $b^3 - 22b - 15$

33) $6x^3 - 25x^2 + 10x - 1$

34) $9a^2 - 42a + 49$

35) $x^2 - 121$

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

37) $5m - 5$

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

39) $4xy(5x^3 + 9y^2)$

40) $(3x + 7)(y - 3)$

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

42) $(u + 4v)(u - 7v)$

43) $(x + 6y)(x - 3y)$

44) $(z + 11)(z - 11)$