

Simplify.

1) $-15 - (-9)$ A) 24 B) -6 C) -24 D) 6 1) _____

2) $-3\left(\frac{2}{5}\right)$ A) $-\frac{7}{15}$ B) $\frac{6}{5}$ C) $-\frac{6}{5}$ D) $-\frac{15}{2}$ 2) _____

3) $3 \cdot 5 - 4(4)^2 \div (-8)$ A) -22 B) 47 C) 23 D) $\frac{49}{8}$ 3) _____

4) $3(6 - y) - 7(-2 + 3y)$ A) $18y + 32$ B) $-6y + 32$ C) $2y + 32$ D) $-24y + 32$ 4) _____

Evaluate for the value of the variable(s) indicated.

5) $-4x^2 - 8x - 2$ for $x = -3$ A) -14 B) 58 C) 10 D) -62 5) _____

Solve for the variable. Noninteger answers may be left in fractional form or decimal form.

6) $5(y + 6) = 6(y - 8)$ A) $y = 78$ B) $y = 18$ C) $y = -78$ D) $y = -18$ 6) _____

7) $-3y + 5 + 2(y + 1) = 2y - 1$ A) $y = \frac{8}{3}$ B) $y = 2$ C) $y = \frac{1}{8}$ D) $y = \frac{1}{5}$ 7) _____

8) $3(2x - 5) = 5(x + 4)$ A) $x = 35$ B) $x = 8$ C) $x = 5$ D) $x = -5$ 8) _____

Provide an appropriate response.

9) Solve for W. $P = 2L + 2W$ A) $W = \frac{P - L}{2}$ B) $W = \frac{P - 2L}{2}$ C) $W = P - L$ D) $W = d - 2L$ 9) _____

Solve.

10) A number is doubled and then decreased by 14. The result is 72. What is the original number? A) 29 B) -29 C) 43 D) 172 10) _____

11) A rectangle has a length 7 meters longer than double the width. The perimeter is 206 meters. Find the dimensions of the rectangle. A) width = 64 m; length = 142 m B) width = 48 m; length = 55 m C) width = 32 m; length = 71 m D) width = 37 m; length = 81 m 11) _____

- 12) Nancy has \$8.50 in change. She has three times as many nickels as quarters. She has two more quarters than dimes. How many coins of each type does he have? 12) _____
- A) 19 quarters, 21 dimes, 57 nickels B) 57 quarters, 55 dimes, 19 nickels
C) 19 quarters, 17 dimes, 57 nickels D) 21 quarters, 19 dimes, 63 nickels

Simplify.

- 13) $(-7x^2y)(-3x^5y^4)$ 13) _____
A) $21x^{10}y^4$ B) $-10x^7y^4$ C) $21x^7y^5$ D) $-21x^7y^4$
- 14) $\frac{-25x^7y^2}{30x^5y^{10}}$ 14) _____
A) $-\frac{5y^8}{6x^2}$ B) $-\frac{5x^2y^{20}}{6}$ C) $-\frac{5x^2}{6y^8}$ D) $-\frac{5x^2}{6y^{20}}$

Combine.

- 15) $(9x^2 + 11x - 2) + (-6x^2 + 3x + 5)$ 15) _____
A) $3x^2 + 14x - 7$ B) $3x^2 + 14x + 3$ C) $3x^2 - 14x + 3$ D) $3x^2 + 17x - 7$

Multiply.

- 16) $5x^3(2x^4 + 4x^2 - 7x - 2)$ 16) _____
A) $10x^7 + 20x^5 + 5x^4 - 2x^3$ B) $10x^{12} + 20x^6 - 35x^3 - 10$
C) $10x^7 + 20x^5 - 35x^4 - 10x^3$ D) $10x^7 + 4x^5 - 7x^4 - 10x^3$
- 17) $(4a - 2b)(6a - 9b)$ 17) _____
A) $24a^2 - 36ab + 18b^2$ B) $24a^2 - 48ab - 48b^2$
C) $24a^2 - 12ab + 18b^2$ D) $24a^2 - 48ab + 18b^2$
- 18) $(9s - 7t)(9s + 7t)$ 18) _____
A) $81s^2 - 126st - 49t^2$ B) $81s^2 + 126st - 49t^2$
C) $81s^2 - 49t^2$ D) $81s^2 + 49t^2$

Divide.

- 19) $30x^9 + 42x^7 + 48x^5 \div 6x^5$ 19) _____
A) $5x^9 + 7x^7 + 8x^5$ B) $30x^4 + 42x^2 + 48$
C) $-30x^4 + 42x^2 - 48$ D) $5x^4 + 7x^2 + 8$

If possible, factor the polynomial completely. If a polynomial cannot be factored, state that it is prime.

- 20) $x^2 + 4x - 45$ 20) _____
A) $(x + 9)(x - 5)$ B) Prime C) $(x - 9)(x + 1)$ D) $(x - 9)(x + 5)$
- 21) $49x^2 - 81$ 21) _____
A) $(7x - 9)^2$ B) $(7x + 9)^2$ C) $(7x + 9)(7x - 9)$ D) Prime
- 22) $10y^2 + 23y + 12$ 22) _____
A) $(10y + 3)(y + 4)$ B) Prime C) $(2y - 3)(5y - 4)$ D) $(2y + 3)(5y + 4)$

23) $15x^2 - 18x - 25x + 30$

A) $(3x + 5)(5x + 6)$

B) $(15x - 5)(x - 6)$

C) $(15x + 5)(x + 6)$

D) $(3x - 5)(5x - 6)$

23) _____

Find the missing coordinate to complete the ordered pair.

24) $4x + y = 6$ (, -2)

A) (-2, 0)

B) (-2, 2)

C) (2, -2)

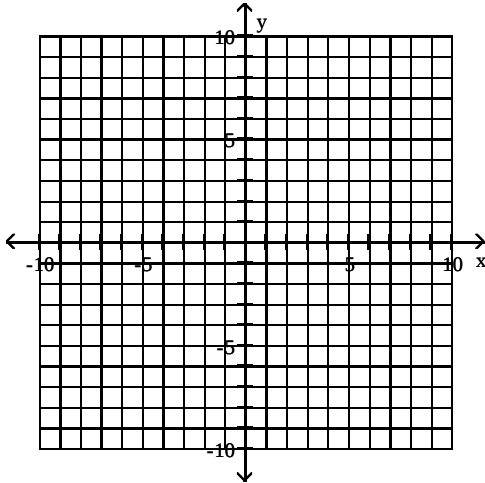
D) (0, -2)

24) _____

Graph the equation by plotting the intercepts.

25) $-3x - 6y = 6$

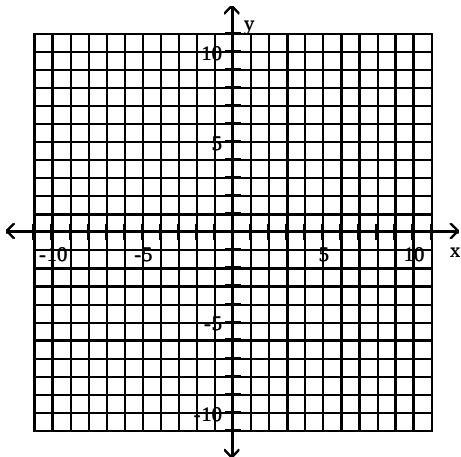
25) _____



Graph.

26) $y = -\frac{1}{2}x + 2$

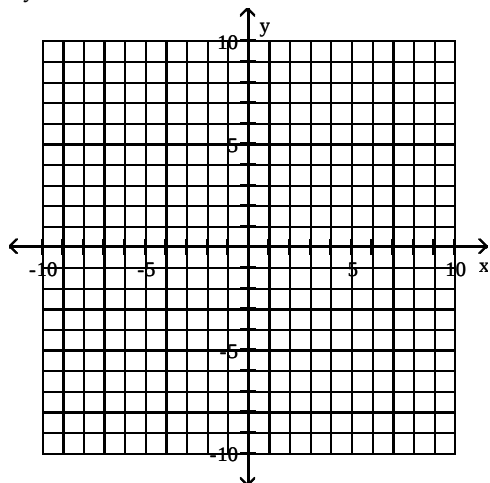
26) _____



Graph the equation.

27) $y = 3$

27) _____



Provide an appropriate response.

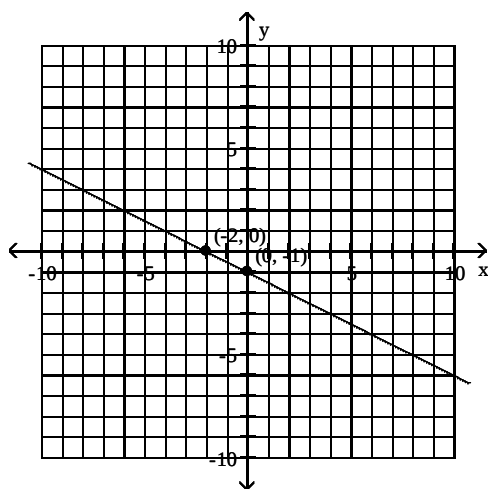
28) Find the slope of the line that passes through $(3, -5)$ and $(5, 3)$.

28) _____

Answer Key

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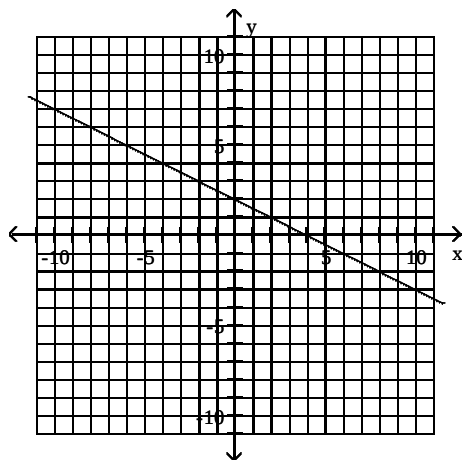
- 1) B
- 2) C
- 3) C
- 4) D
- 5) A
- 6) A
- 7) A
- 8) A
- 9) B
- 10) C
- 11) C
- 12) C
- 13) C
- 14) C
- 15) B
- 16) C
- 17) D
- 18) C
- 19) D
- 20) A
- 21) C
- 22) D
- 23) D
- 24) C
- 25)



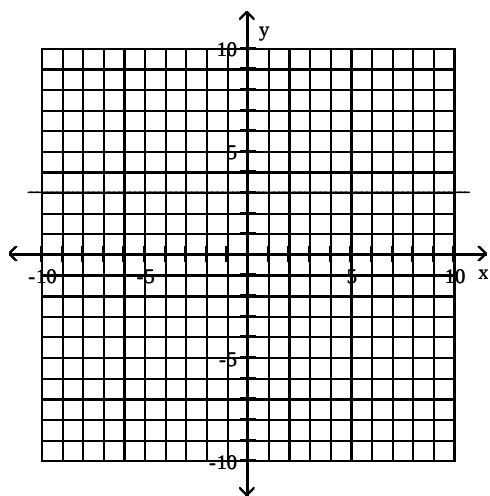
Answer Key

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26)



27)



28) 4