

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

Simplify.

1) $76 - 2 \cdot 9 + 209 \div (-19)$

A) 47

B) -15

C) -849

D) 655

Calculate using the rules for order of operations.

2) $33 - (-3)^2 + 37 \div (-5) \cdot 6$

A) -2.0333333

B) -20.4

C) -2.4

D) -2.6333333

Simplify.

3) $-|6(-5)| + |6(-6)|$

A) 6

B) -66

C) -6

D) -11

4) $9x^3 + x - 4(7x^2 - 4x)$

A) $9x^3 - 28x^2 - 15x$

B) $9x^3 - 28x^2 + 17x$

C) $9x^3 - 28x^2 + x + 16$

D) $9x^3 - 7x^2 - 3x$

5) Evaluate the polynomial $-2x^2 - y^2 + xy$ for $x = -3$ and $y = 4$.

A) -22

B) -46

C) 22

D) -14

Solve the equation.

6) $-3x + 2(-2x - 4) = -6 - 9x$

A) 1

B) $\frac{7}{8}$

C) -1

D) -7

7) $4(5x - 1) = 16$

A) $\frac{3}{5}$

B) 1

C) $\frac{17}{20}$

D) $\frac{3}{4}$

Solve the formula for the specified variable.

8) $S = 3rh + 2r^2$ for h

A) $h = \frac{2S}{3r} - 1$

B) $h = 3(S - 2r)$

C) $h = S - 2r$

D) $h = \frac{S - 2r^2}{3r}$

Solve.

9) $-28r - 28 \leq -4(6r + 1)$

A) $r < -6$

B) $r \leq -6$

C) $r > 6$

D) $r \geq -6$

Solve the problem.

10) The sum of twice a number and 15 less than the number is the same as the difference between -7 and the number. What is the number?

A) 3

B) 1

C) 4

D) 2

11) A rectangular Persian carpet has a perimeter of 208 inches. The length of the carpet is 30 inches more than the width. What are the dimensions of the carpet?

A) 67 in., 97 in.

B) 89 in., 119 in.

C) 37 in., 67 in.

D) 74 in., 104 in.

Which proportion can be used to solve the following problem?

12) If a boat uses 16 gallons of gas to go 60 miles, how many miles can the boat travel on 64 gallons of gas?

A) $\frac{16}{60} = \frac{x}{64}$

B) $\frac{x}{60} = \frac{16}{64}$

C) $\frac{x}{60} = \frac{64}{16}$

D) $\frac{64}{60} = \frac{16}{x}$

Simplify.

13) $(w^7z)^2(w^3z^6)$

A) $w^{17}z^8$

B) $w^{42}z^{12}$

C) $w^{12}z^8$

D) $w^{10}z^8$

Simplify. Do not use negative exponents in your answer.

14) $\frac{5x^{-3}}{x^4y^{-3}z^3}$

A) $\frac{5y^2}{x^7z^3}$

B) $\frac{5x^7}{y^2z^3}$

C) $\frac{y^2}{5x^7z^3}$

D) $\frac{5}{x^7y^2z^3}$

Simplify.

15) $-5^{-2}y^0$

A) -25

B) $\frac{1}{25}$

C) $-\frac{1}{25}$

D) 25

Convert to decimal notation.

16) 6.3662×10^7

A) 445.634

B) 63,662,000

C) 6,366,200

D) 636,620,000

Subtract.

17) $(-4x^7 + 7x^9 - 7 - 8x^8) - (-6 - 6x^8 + 5x^9 + 8x^7)$

A) $2x^9 - 2x^8 - 12x^7 - 1$

B) $2x^9 - 14x^8 + 4x^7 - 13$

C) $12x^9 - 14x^8 + 4x^7 - 1$

D) $12x^9 - 14x^8 + 4x^7 - 13$

Multiply.

18) $-11x^3(-2x^7 + 8)$

A) $22x^{10} - 88x^3$

B) $22x^{10} + 8$

C) $-66x^3$

D) $22x^7 - 88$

19) $(4x + 9)(x + 3)$

A) $4x^2 + 27x + 21$

B) $4x^2 + 21x + 21$

C) $4x^2 + 21x + 27$

D) $4x^2 + 19x + 27$

Factor.

20) $84x^9y^8 + 96x^2y^5 + 120x^5y^3$

A) $12x^2y^3(7x^7y^5 + 8y^2 + 10x^3)$

B) No common factor

C) $12x^2(7x^7y^8 + 8y^5 + 10x^3y^3)$

D) $12(7x^9y^8 + 8x^2y^5 + 10x^5y^3)$

Factor completely. If the polynomial is prime, state this.

21) $64y^4 - 81$

A) $(64y^2 + 1)(y^2 - 81)$

B) Prime

C) $(8y^2 + 9)(8y^2 - 9)$

D) $(8y^2 - 9)^2$

22) $3x^2 - 6x + xy - 2y$

A) Prime

B) $x(x - 2)(3x + y)$

C) $(x - 2)(3x + y)$

D) $(x - 2)(3x - y)$

Identify a factor of the following trinomial.

23) $8z^2 + 6z - 9$

A) $(4z + 3)$

B) $(2z + 3)$

C) $(8z - 3)$

D) $(2z - 3)$

Simplify.

24) $\frac{3x + 3}{15x^2 + 21x + 6}$

A) $\frac{1}{5x + 2}$

B) $\frac{3x + 5}{5x + 21}$

C) $\frac{3x}{5x + 2}$

D) $\frac{3x + 3}{15x^2 + 21x + 6}$

Solve the equation.

25) $5x^2 - 40x + 75 = 0$

A) 3, 5

B) -3, -5

C) 5, 3, 5

D) 0, 3, 5

26) $12y^2 + 25y = -12$

A) $\frac{4}{3}, \frac{3}{4}$

B) $\frac{4}{3}, -\frac{3}{4}$

C) $-\frac{4}{3}, -\frac{3}{4}$

D) $-\frac{1}{3}, -\frac{1}{4}$

Multiply and, if possible, simplify. Assume that all variables represent nonnegative numbers.

27) $\sqrt{3x^2y} \cdot \sqrt{15x^3y^4}$

A) $9x^4y^4\sqrt{5xy}$

B) $3\sqrt{5x^5y^5}$

C) $3x^2y^2\sqrt{5xy}$

D) $3x^2y^2\sqrt{5}$

Add or subtract. Simplify by combining like radical terms, if possible.

28) $-2\sqrt{27} + 6\sqrt{48}$

A) $-18\sqrt{3}$

B) $30\sqrt{3}$

C) $18\sqrt{3}$

D) $-30\sqrt{3}$

Find the intercepts for the equation.

29) $-2x + 4y = 4$

A) $(0, -5), (0, -6)$

B) $(-5, 0), (-6, 0)$

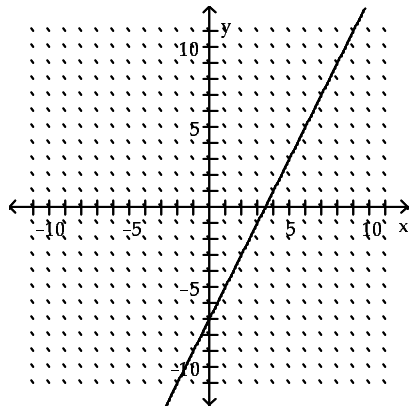
C) $(-2, 0), (0, 1)$

D) $(-2, -6), (-5, 4)$

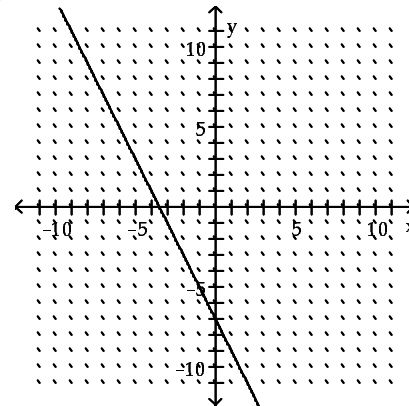
Graph the linear equation.

30) $y = 2x - 7$

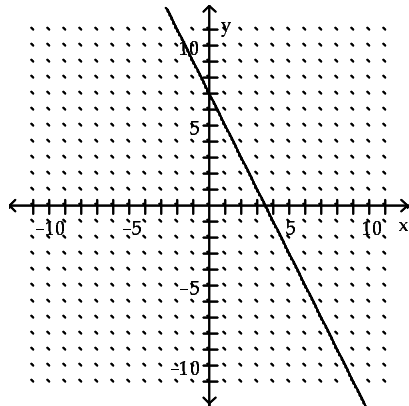
A)



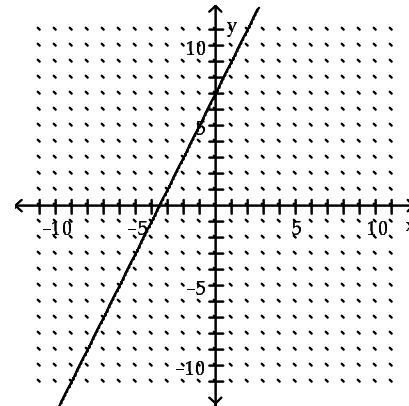
B)



C)



D)



Answer Key

Testname: EXIT2.TST

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