

# Test Bank for Prealgebra 5th Edition Lial Hestwood 0321845021

9780321845023

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Test Bank:

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Solution Manual:

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

**Identify the parts of each expression. Choose from these labels: variable, constant, and coefficient.**

- |   |  |
|---|--|
| 1) $t + 5$  | 1) _____                                   |
| A) $t$ is a constant; 5 is a variable.                      | B) $t$ is a variable; 5 is a variable.     |
| C) $t$ is a constant; 5 is a constant.                      | D) $t$ is a variable; 5 is a constant.     |
| 2) $2k$ 2) _____  |  |
| A) 2 is a coefficient; $k$ is a constant.                   | B) 2 is a constant; $k$ is a variable.     |
| C) 2 is a coefficient; $k$ is a variable.                   | D) 2 is a variable; $k$ is a constant      |
| 3) $-20 + t$ 3) _____                                       |  |
| A) $-20$ is a variable; $t$ is a variable.                  | B) $-20$ is a variable; $t$ is a constant. |
| C) $-20$ is a constant; $t$ is a constant.                  | D) $-20$ is a constant; $t$ is a variable. |
| 4) $\frac{x}{y}$ 4) _____                                   |  |
| A) $x$ is a variable; $y$ is a variable.                    | B) $x$ is a constant; $y$ is a variable.   |
| C) $x$ is a variable; $y$ is a constant.                    | D) $x$ is a constant; $y$ is a constant.   |
| 5) $18h + 9$ 5) _____                                       |  |
| A) 18 is a coefficient; $h$ is a variable; 9 is a variable. |  |
| B) 18 is a coefficient; $h$ is a variable; 9 is a constant. |  |
| C) 18 is a variable; $h$ is a variable; 9 is a constant.    |  |
| D) 18 is a coefficient; $h$ is a constant; 9 is a constant. |  |
| 6) $-3g$ 6) _____   |  |
| A) $-3$ is a coefficient; $g$ is a variable.                | B) $-3$ is a variable; $g$ is a constant.  |
| C) $-3$ is a coefficient; $g$ is a constant.                | D) $-3$ is a variable; $g$ is a variable.  |

**Evaluate the expression.**

- 7) The expression (rule) for finding the total time for a commuting trip is  $d + 15$  where  $d$  is the normal driving time and 15 is the number of minutes added to allow for delays. Find the total commuting time when the normal driving time is 36 minutes. 7)
- A) 36 min      B) 21 min      C) 72 min      D) 51 min

- 8) The expression (rule) for finding the perimeter of a hexagon (6 sides) with sides of equal length is  $6s$ , where  $s$  is the length of one side. Evaluate the expression when the length of one side is 11 centimeters. 8) \_\_\_\_\_
- A) 17 cm      B) 55 cm      C) 66 cm      D) 77 cm
- 9) The expression (rule) for finding the gas mileage rate for a car or truck is  $m/g$ , where  $m$  is the number of miles travelled and  $g$  is the number of gallons of gas used. Evaluate the expression when 130 miles were travelled and 10 gallons of gas were used. 9) \_\_\_\_\_
- A) 26 m/g      B) 13 m/g      C) 120 m/g      D) 140 m/g
- 10) The expression (rule) for determining how many boxes of paper to order each week for an accounting office is  $2e + 5$ , where  $e$  is the number of employees. Evaluate the expression for 13 employees. 10) \_\_\_\_\_
- A) 26 boxes      B) 31 boxes      C) 32 boxes      D) 21 boxes

Evaluate the expression to determine the entry missing from the table.

	Value of x	Expression
11)	-7	$\frac{5x}{5 \cdot -7 \text{ is } -35}$
	-1	

A)  $5 \cdot -1 \text{ is } -5$

B)  $5 \cdot -1 \text{ is } 4$

C)  $5 \cdot -1 \text{ is } -4$

D)  $5 \cdot -1 \text{ is } 5$

11) \_\_\_\_\_

	Value of x	Expression
12)	-6	$\frac{3x + x}{3 \cdot -6 + -6 \text{ is } -24}$
	1	

A)  $3 \cdot 1 + 1 \text{ is } 4$

B)  $3 \cdot 1 + 1 \text{ is } 5$

C)  $3 \cdot 1 \cdot 1 \text{ is } 4$

D)  $3 \cdot 1 \text{ is } 4$

12) \_\_\_\_\_

	Value of x	Value of y	Expression
13)	7	9	$\frac{2xy}{2 \cdot 7 \cdot 9 \text{ is } 126}$
	3	4	

A)  $3 \cdot -3 \cdot 4 \text{ is } -24$

B)  $3 \cdot -3 \cdot 4 \text{ is } -36$

C)  $2 \cdot -3 \cdot -3 \text{ is } -24$

D)  $2 \cdot -3 \cdot 4 \text{ is } -24$

13) \_\_\_\_\_

	Value of x	Value of y	Expression
14)	6	7	$\frac{-3xy}{-3 \cdot 6 \cdot 7 \text{ is } -126}$
	-1	-5	
			is

A)  $-3 \cdot -1 \cdot -1 = -15$

B)  $3 \cdot -5 \cdot 5 = -15$

C)  $-3 \cdot -1 \cdot -5 \text{ is } 15$

D)  $-3 \cdot -1 \cdot -5 \text{ is } -15$

14) \_\_\_\_\_

	Value of x	Value of y	Expression
15)	6	7	$\frac{-2x + y}{-2 \cdot 6 + 7 \text{ is } -5}$
	2	4	

A)  $2 \cdot 2 + 2 \text{ is } -$

B)  $2 \cdot -4 \text{ is } -8$

C)  $2 \cdot 2 - 4 \text{ is } -8$

D)  $2 \cdot -4 + 2 \text{ is } 10$

15) \_\_\_\_\_

Rewrite the given expression without exponents.

16)  $t^4$

A)  $\frac{t}{4}$

B)  $t + t + t + t$

C)  $t + 4$

D)  $t \cdot t \cdot t \cdot t$

16) \_\_\_\_\_

17)  $g^6$

A)  $g + 6$

B)  $g + g + g + g + g + g$

C)  $\frac{g}{6}$

D)  $g \cdot g \cdot g \cdot g \cdot g \cdot g$

17) \_\_\_\_\_

18)  $w^5 z^3$

- A)  $w \cdot w \cdot w \cdot z \cdot z \cdot z \cdot z \cdot z$   
 C)  $w + w + w + w + w + z + z + z + z$

19)  $x^2 y^4$

- A)  $1 \cdot x \cdot x \cdot y \cdot y \cdot y \cdot y$   
 C)  $1 \cdot x + x + y + y + y + y$

20)  $r^9 y^2$

- A)  $9 \cdot r + r + r + r + y + y$   
 C)  $9 \cdot r \cdot r \cdot y \cdot y \cdot y$

21)  $d^{20} k^3$

- A)  $20 \cdot d \cdot d \cdot d \cdot k \cdot k \cdot k \cdot k$   
 C)  $20 \cdot d + d + d + d + k + k + k + k$

22)  $h^{14} m^2$

- A)  $14 \cdot h + h + m + m + m + m$   
 C)  $14 \cdot h \cdot h \cdot m \cdot m \cdot m \cdot m$

23)  $f^{28} g^5$

- A)  $28 \cdot f \cdot f \cdot f \cdot f \cdot g \cdot g \cdot g \cdot g \cdot g$   
 C)  $28 \cdot f + f + f + g + g + g + g + g + g$

24)  $f^3 g^4 h^2$

- A)  $1 \cdot f \cdot f \cdot f \cdot f \cdot g \cdot g \cdot h \cdot h \cdot h$   
 C)  $1 \cdot f + f + f + f + g + g + h + h + h$

25)  $x^2 y^3 z^2$

- A)  $x + x + x + y + y + y + z + z$   
 C)  $x + x + y + y + y + z + z$

Evaluate the given expression.

26)  $x^3$  when  $x$  is  $-1$ .

- A)  $-1$       B)  $1$

- B)  $x \cdot x \cdot x \cdot y \cdot y \cdot z \cdot z$   
 D)  $x \cdot x \cdot y \cdot y \cdot y \cdot z \cdot z$

27)  $c x^3$  when  $c$  is  $-5$  and  $x$  is  $-3$ .

- A)  $-45$       B)  $135$

- C)  $-3$       D)  $-2$

28)  $5mn$  when  $m$  is  $-1$  and  $n$  is  $-3$ .

- C)  $45$       D)  $-32$

- A)  $1$       B)  $12$

- C)  $15$       D)  $-15$

29)  $-5v^2 t$  when  $v$  is  $4$  and  $t$  is  $5$ .

18) \_\_\_\_\_

- B)  $w \cdot w \cdot w \cdot w \cdot w \cdot z \cdot z \cdot z$   
 D)  $w + w + w + z + z + z + z + z$

19) \_\_\_\_\_

- B)  $1 \cdot x \cdot x \cdot x \cdot x \cdot x \cdot y \cdot y$   
 D)  $1 \cdot x + x + x + x + x + y + y$

20) \_\_\_\_\_

- B)  $9 \cdot r + r + y + y + y$   
 D)  $9 \cdot r \cdot r \cdot r \cdot y \cdot y$

21) \_\_\_\_\_

- B)  $20 \cdot d + d + d + k + k + k + k$   
 D)  $20 \cdot d \cdot d \cdot d \cdot d \cdot k \cdot k \cdot k$

22) \_\_\_\_\_

- B)  $14 \cdot h + h + h + h + m + m$   
 D)  $14 \cdot h \cdot h \cdot h \cdot h \cdot m \cdot m$

23) \_\_\_\_\_

- B)  $28 \cdot f \cdot f \cdot f \cdot f \cdot f \cdot g \cdot g \cdot g$   
 D)  $28 \cdot f + f + f + f + f + g + g + g + g$

24) \_\_\_\_\_

- B)  $1 \cdot f \cdot f \cdot f \cdot g \cdot g \cdot g \cdot g \cdot h \cdot h$   
 D)  $1 \cdot f + f + f + f + g + g + g + g + h + h$

25) \_\_\_\_\_

- B)  $x \cdot x \cdot x \cdot y \cdot y \cdot z \cdot z$   
 D)  $x \cdot x \cdot y \cdot y \cdot y \cdot z \cdot z$

26) \_\_\_\_\_

- C)  $-3$       D)  $-2$

27) \_\_\_\_\_

- C)  $45$       D)  $-32$

28) \_\_\_\_\_

- C)  $15$       D)  $-15$

29) \_\_\_\_\_

A) 500

B) 400

C) 400

D) 500

30)  $v^2tw^3$  when v is -3, t is 5, and w is -3.

30) \_\_\_\_\_

A) 2025

B) 2025

C) 1215

D) 1215

31)  $2x^2yz$  when x is -4, y is -2, and z is 3.

31) \_\_\_\_\_

A) 192

B) 96

C) 96

D) 192

**Evaluate the expression.**

32)  $|xy| + |yz|$ ; when x is 3, y is -1, and z is 5.

32) \_\_\_\_\_

A) 6

B) -6

C) -8

D) 8

33)  $|xy| + |yz| - |z^2|$ ; when x is -2, y is -1, and z is 4.

33) \_\_\_\_\_

A) -20  
 $z^2$

B) 20

C) -22

D) -10

34)  $\overline{-2y + z}$ ; when y is 5 and z is 10.

34) \_\_\_\_\_

A) 100

B) 0

C) undefined

D) -1

$y^2$

35)  $\frac{y^2}{x + 2y}$ ; when x is 6 and y is -4.

35) \_\_\_\_\_

A) -8

B) 8

C) 0

D) undefined

**Identify the like terms in the given expression. Then identify the coefficients of the like terms.**

36)  $6t^2 + 10t + -5rt + 8t^2$

36) \_\_\_\_\_

A) Like Terms:  $6t^2$  and  $10t$

Coefficients: 6 and 10

C) Like Terms:  $6t^2$  and  $8t^2$

Coefficients: 6 and 8

B) Like Terms: 6 and 8

Coefficients:  $6t^2$  and  $8t^2$

D) Like Terms:  $10t$  and  $-5rt$

Coefficients: 10 and 5

37)  $8x^2y + 5xy + -8xy^2 + 12x + 7xy + -8x^2y^3 + 12$

37) \_\_\_\_\_

A) Like Terms:  $7xy$  and  $12x$

Coefficients: 7 and 12

C) Like Terms:  $5xy$  and  $7xy$

Coefficients: 5 and 7

B) Like Terms: 5 and 7

Coefficients:  $5xy$  and  $7xy$

D) Like Terms:  $8x^2y$  and  $-8xy^2$

Coefficients: 8 and -8

38)  $10k + 9n + -7k + -8kn + 12$

38) \_\_\_\_\_

A) Like Terms:  $-7k$  and  $-8kn$

Coefficients: 7 and 8

C) Like Terms:  $9n$  and  $-8kn$

Coefficients: 9 and 12

B) Like Terms: 10 and -7

Coefficients:  $10k$  and  $-7k$

D) Like Terms:  $10k$  and  $-7k$

Coefficients: 10 and -7

**Simplify the given expression.**

39)  $6t + 10t$

39) \_\_\_\_\_

A)  $-4t$

B)  $16t^2$

C)  $-16t$

D)  $16t$

- 40)  $3mn - 3mn$       A)  $6mn$       B)  $0$       C)  $mn$       D)  $-mn$       40) \_\_\_\_\_
- 41)  $9y^2 + 8y^2$       A)  $17y^2$       B)  $-17y^2$       C)  $17y^2$       D)  $17y^4$       41) \_\_\_\_\_
- 42)  $20wy^3z - 6wy^3z$       A)  $14wy^3z$       B)  $14w^2y^6z^2$       C)  $-14wy^3z$       D)  $26wy^3z$       42) \_\_\_\_\_
- 43)  $3hk + 6hk + 6hk$       A)  $-15hk$       B)  $-15h^2k^2$       C)  $15h^2k^2$       D)  $15hk$       43) \_\_\_\_\_
- 44)  $6ef + 2ef - 27ef$       A)  $19e^2f$       B)  $-19ef$       C)  $-19e^2f$       D)  $19ef$       44) \_\_\_\_\_
- 45)  $-8z - 7z - 2z$       A)  $17z$       B)  $17z^2$       C)  $-17z$       D)  $-17z^2$       45) \_\_\_\_\_
- Simplify the given expression. Write the answer with variables in alphabetical order and any constant term last.**
- 46)  $12s + 2t + 12s$       A)  $14t + 12s$       B)  $-24s + 2t$       C)  $24s^2 + 2t$       D)  $24s + 2t$       46) \_\_\_\_\_
- 47)  $13 + 11t + 13$       A)  $11t + 169$       B)  $11t^2 + 26$       C)  $11t - 26$       D)  $11t + 26$       47) \_\_\_\_\_
- 48)  $12xy + 4xy + 15xy$       A)  $27x^2y + 4xy$       B)  $27x^2y + 4xy$       C)  $27xy^2 + 4xy$       D)  $16xy^2 + 15xy$       48) \_\_\_\_\_
- 49)  $-7y^2z + 14xy^2 - 4y^2z + 2$       A)  $-14xy^2 - 11y^2z + 2$       B)  $14xy^2 + 11y^2z + 2$       C)  $-14xy^2 + 11y^2z + 2$       D)  $14xy^2 - 11y^2z + 2$       49) \_\_\_\_\_
- 50)  $8m^2 + 2m - 18m^2 + 15m$       A)  $10m^2 + 17m$       B)  $10m^2 - 17m$       C)  $-10m^2 - 17m$       D)  $-10m^2 + 17m$       50) \_\_\_\_\_

$$51) -5y^3 + 4y - 11y^2 + 13$$

2

51) \_\_\_\_\_

A) cannot be simplified

$$B) -16y^3 + 4y + 13$$

$$C) 16y^2 - 4y + 13$$

3

$$D) -16y^2 + 4y + 13$$

$$52) 3b - 5a - 5c + 5b - 3a$$

52)

$$A) -2a + 2b - 5c$$

$$B) -8a + 2b$$

C) cannot be simplified

$$D) -8a + 2b - 5c$$

**Simplify by using the associative property of multiplication.**

53)  $7(3t)$

A)  $10t$

B)  $-21t$

C)  $21t$

D)  $-10t$

53) \_\_\_\_\_

54)  $-7(9z^3)$

A)  $-16z^3$

B)  $63z^3$

C)  $-63z^3$

D)  $16z^3$

54) \_\_\_\_\_

55)  $2(-7p^2)$

A)  $-14p^2$

B)  $14p^2$

C)  $9p^2$

D)  $-9p^2$

55) \_\_\_\_\_

56)  $-2(-6fg^2)$

A)  $-12fg^2$

B)  $12f^2g^4$

C)  $12fg^2$

D)  $-12f^2g^4$

56) \_\_\_\_\_

57)  $7(5fg^2h)$

A)  $35f^2g^4h^2$

B)  $35fg^2h$

C)  $-35fg^2h$

D)  $-35f^2g^4h^2$

57) \_\_\_\_\_

58)  $-8(-d)$

A)  $-8d$

B)  $-9d$

C)  $8d$

D)  $9d$

58) \_\_\_\_\_

**Use the distributive property to simplify this expression.**

59)  $3(t + 4)$

A)  $3t - 12$

B)  $3t - 4$

C)  $3t + 4$

D)  $3t + 12$

59) \_\_\_\_\_

60)  $3(z - 2)$

A)  $3z + 6$

B)  $3z - 2$

C)  $3z + 2$

D)  $3z - 6$

60) \_\_\_\_\_

61)  $-5(5k - 2)$

A)  $25k + 10$

B)  $-25k + 10$

C)  $-25k - 10$

D)  $25k - 10$

61) \_\_\_\_\_

62)  $-3(d + 4)$

A)  $-3d - 12$

B)  $-3d - 4$

C)  $-3d + 12$

D)  $-3d + 4$

62) \_\_\_\_\_

**Simplify the given expression.**

63)  $-4(y + 6) + 8y$

A)  $-4y - 24$

B)  $4y + 24$

C)  $-4y + 24$

D)  $4y - 24$

63) \_\_\_\_\_

64)  $7(w - 6) + 2$

A)  $7w - 44$

B)  $7w - 40$

C)  $7w + 40$

D)  $7w + 44$

64) \_\_\_\_\_

65)  $3 + 5(5t + 9)$

A)  $5t + 48$

B)  $5t + 12$

C)  $25t + 48$

D)  $3t + 12$

65) \_\_\_\_\_

66)  $2 + 4(4w + 4) - w$

A)  $17w + 18$

B)  $17w - 18$

C)  $15w + 6$

D)  $15w + 18$

66) \_\_\_\_\_

67)  $5 - 4(4w - 3) + w$

A)  $15w + 17$

B)  $-15w - 17$

C)  $15w - 17$

D)  $-15w + 17$

67) \_\_\_\_\_

68)  $-3 + 2(-3w + 8) + 5(6w - 1)$  68) \_\_\_\_\_  
A)  $-24w + 8$       B)  $24w - 8$       C)  $-24w - 8$       D)  $24w + 8$

69)  $3(3z) - 3 + 5(-4z + 9)$  69) \_\_\_\_\_

A)  $-11z + 42$       B)  $9z + 42$       C)  $-11z + 6$       D)  $-11z - 42$

70)  $-5(-4n) + 6(n - 1) + 3(-2n) + 6 + n$  70) \_\_\_\_\_  
A)  $20n$       B)  $20n + 1$       C)  $-21n$       D)  $21n$

Select the solution of the given equation from the answer choices provided.

71)  $y + 10 = 14$  71) \_\_\_\_\_  
A) 4      B) -24      C) -4      D) 24

72)  $y + 2 = -23$  72) \_\_\_\_\_  
A) -21      B) -25      C) 25      D) 21

73)  $z + 2 = 0$  73) \_\_\_\_\_  
A) 2      B) 0      C) -2      D) 4

Solve the given equation.

74)  $w + 3 = 24$  74) \_\_\_\_\_  
A)  $w = 27$       B)  $w = 21$       C)  $w = -21$       D)  $w = -27$

75)  $13 = e - 12$  75) \_\_\_\_\_  
A)  $e = 1$       B)  $e = -25$       C)  $e = 25$       D)  $e = -1$

76)  $-13 = z + 9$  76) \_\_\_\_\_  
A)  $z = 22$       B)  $z = 4$       C)  $z = -4$       D)  $z = -22$

77)  $-8 + h = 5$  77) \_\_\_\_\_

A)  $h = 3$       B)  $h = 13$       C)  $h = -13$       D)  $h = -3$

78)  $y - 2 = 0$  78) \_\_\_\_\_  
A)  $y = 4$       B)  $y = 0$       C)  $y = 2$       D)  $y = -2$

79)  $m - 6 = -28$  79) \_\_\_\_\_  
A)  $m = 34$       B)  $m = -22$       C)  $m = 22$       D)  $m = -34$

Determine whether the equation balances when the proposed solution is tested.

80)  $w - 9 = 13$  80) \_\_\_\_\_  
Solution is 22  
A) Does not balance      B) Balances

81)  $6 + s = 3$  81) \_\_\_\_\_  
Solution is 9  
A) Does not balance      B) Balances

82)  $-3 = -8 + w$

Solution is 5

A) Balances

82)

B) Does not balance

**Simplify each side of the equation, if possible. Then solve the equation.**

83)  $p - 8 = -2 + 8$

A)  $p = 18$

B)  $p = 14$

C)  $p = -14$

D)  $p = -18$

83)

84)  $9 + n = -5 - 13$

A)  $n = 9$

B)  $n = -27$

C)  $n = -9$

D)  $n = 27$

84)

85)  $7r - 6r = -3 + 13$

A)  $r = 16$

B)  $r = -10$

C)  $r = -16$

D)  $r = 10$

85)

86)  $-14w - 12 + 15w = -4 + 6$

A)  $w = -22$

B)  $w = 14$

C)  $w = 22$

D)  $w = -14$

86)

87)  $-4 + 4 = 8 + r$

A)  $r = 8$

B)  $r = -8$

C)  $r = 16$

D)  $r = -16$

87)

88)  $-6k + 7k = 24 - 1 + 4$

A)  $k = 29$

B)  $k = -29$

C)  $k = 27$

D)  $k = -27$

88)

89)  $-2 - 4 + 14 = 16y - 11 - 15y + 1$

A)  $y = 20$

B)  $y = -18$

C)  $y = -1$

D)  $y = 18$

89)

90)  $-6 - 4 + 11 = 14m - 10 - 13m + 3$

A)  $m = -8$

B)  $m = -1$

C)  $m = 6$

D)  $m = 8$

90)

91)  $-21 - 3 - 3 + 13 = -11 - 2n + 6 + 3n$

A)  $n = -9$

B)  $n = -19$

C)  $n = 9$

D)  $n = -31$

91)

92)  $-4x + 2x + 6 + 3x = |2 - 9| - |-5 + 4|$

A)  $x = 0$

B)  $x = 6$

C)  $x = 14$

D)  $x = 2$

92)

**Solve the problem.**

93) The BBQ committee always orders one pound of ribs for each person who signs up for the Homecoming BBQ, plus 10 extra pounds of ribs. The committee ordered 105 pounds of ribs this year. Solving the equation  $n + 10 = 105$  will give you the number of people who signed up for the BBQ. Solve the equation.

93)

A)  $n = 95$  people

B)  $n = 105$  people

C)  $n = 10$  people

D)  $n = 115$  people

94) Alex always takes \$15 more than he anticipates needing on a date. Alex takes \$35 on his date with Judith. Solving the equation  $d + 15 = 35$  will give you the amount of money Alex anticipates needing for this date. Solve the equation.

94)

A)  $d = \$15$

B)  $d = \$35$

C)  $d = \$50$

D)  $d = \$20$

**Solve the given equation.**

- 95)  $13g = 0$       A)  $g = -13$       B)  $g = 0$       C)  $g = 13$       D)  $g = 1$       95) \_\_\_\_\_
- 96)  $-19d = 0$       A)  $d = 0$       B)  $d = 1$       C)  $d = -19$       D)  $d = 19$       96) \_\_\_\_\_
- 97)  $15y = 15$       A)  $y = 15$       B)  $y = 0$       C)  $y = 1$       D)  $y = -1$       97) \_\_\_\_\_
- 98)  $-8k = 8$       A)  $k = 0$       B)  $k = 1$       C)  $k = -1$       D)  $k = 8$       98) \_\_\_\_\_
- 99)  $-7m = 21$       A)  $m = -3$       B)  $m = 0$       C)  $m = 3$       D)  $m = -14$       99) \_\_\_\_\_
- 100)  $15z = -30$       A)  $z = 2$       B)  $z = -30$       C)  $z = -2$       D)  $z = 30$       100) \_\_\_\_\_
- 101)  $-56 = -14t$       A)  $t = -4$       B)  $t = -28$       C)  $t = 4$       D)  $t = 28$       101) \_\_\_\_\_
- 102)  $48 = -6w$       A)  $w = -48$       B)  $w = -8$       C)  $w = 8$       D)  $w = 48$       102) \_\_\_\_\_

**Simplify where possible. Then solve the equation.**

- 103)  $2t = -5 + 15$       A)  $t = 10$       B)  $t = 5$       C)  $t = -5$       D)  $t = -10$       103) \_\_\_\_\_
- 104)  $-20 = 5y - y$       A)  $y = \frac{10}{3}$       B)  $y = -6$       C)  $y = 5$       D)  $y = -5$       104) \_\_\_\_\_
- 105)  $17 - 1 = 2r$       A)  $r = 8$       B)  $r = -3$       C)  $r = 0$       D)  $r = -8$       105) \_\_\_\_\_
- 106)  $x - 3x = 12$       A)  $x = -4$       B)  $x = 6$       C)  $x = 4$       D)  $x = -6$       106) \_\_\_\_\_
- 107)  $14 - 14 = 8f - 7f$       A)  $f = 1$       B)  $f = 0$       C)  $f = -1$       D)  $f = 14$       107) \_\_\_\_\_
- 108)  $2q + 2q = 19 - 3 + 20$       A)  $q = 9$       B)  $q = 4$       C)  $q = -4$       D)  $q = -9$       108) \_\_\_\_\_
- 109)  $-15d = 0$       A)  $d = 1$       B)  $d = -15$       C)  $d = -1$       D)  $d = 0$       109) \_\_\_\_\_

110)  $-27w + 11w = 13 - 45$

A)  $w = -2$

B)  $w = 16$

C)  $w = 2$

D)  $w = -16$

110) \_\_\_\_\_

111)  $80 - 30 = 3x - 8x$

A)  $x = -10$

B)  $x = -50$

C)  $x = 50$

D)  $x = 10$

111) \_\_\_\_\_

**Use multiplication to simplify the side of the equation with the variable. Then solve the equation.**

112)  $4(3w) = -48$

A)  $w = 12$

B)  $w = -12$

C)  $w = -4$

D)  $w = 4$

112) \_\_\_\_\_

113)  $-4(-7x) = -84$

A)  $x = 7$

B)  $x = -12$

C)  $x = -3$

D)  $x = -21$

113) \_\_\_\_\_

114)  $28 = -7(-2x)$

A)  $x = -2$

B)  $x = 392$

C)  $x = 2$

D)  $x = 14$

114) \_\_\_\_\_

115)  $64 = 4(-4w)$

A)  $w = -16$

B)  $w = 4$

C)  $w = 16$

D)  $w = -4$

115) \_\_\_\_\_

**Solve the equation.**

116)  $-x = 50$

A)  $x = 50$

B)  $x = 0$

C)  $x = 1$

D)  $x = -50$

116) \_\_\_\_\_

117)  $-x = -27$

A)  $x = 0$

B)  $x = 27$

C)  $x = -27$

D)  $x = 1$

117) \_\_\_\_\_

118)  $20 = -z$

A)  $z = 20$

B)  $z = -20$

C)  $z = 0$

D)  $z = 1$

118) \_\_\_\_\_

**Solve the problem.**

119) The perimeter of a square is 4 times the length of one side,  $s$ . If the perimeter is 36 feet, solving the equation  $4s = 36$  will give the length of one side. Solve the equation.

A)  $s = 9$  feet

B)  $s = 36$  feet

C)  $s = 40$  feet

D)  $s = 10$  feet

119) \_\_\_\_\_

120) The perimeter of an octagon with sides of equal length is 8 times the length of one side,  $s$ . If the perimeter is 152 meters, solving the equation  $8s = 152$  will give the length of one side. Solve the equation.

A)  $s = 19$  meters

B)  $s = 38$  meters

C)  $s = 76$  meters

D)  $s = 152$  meters

120) \_\_\_\_\_

**Solve the equation.**

121)  $8 - 58 = -3(-3m) - 8(2m) + 2m$

A)  $m = 5$

B)  $m = 10$

C)  $m = -10$

D)  $m = 0$

121) \_\_\_\_\_

122)  $-8(3x) + 2(13x) = |48 - 48| + |-4 + 28|$

A)  $x = 14$

B)  $x = -12$

C)  $x = -14$

D)  $x = 12$

122) \_\_\_\_\_

123)  $5(8w) - 3w - 10(4w) = |-42 - 49| - 70$

A)  $w = 7$

B)  $w = -7$

C)  $w = -8$

D)  $w = 1$

123) \_\_\_\_\_

124)  $3t + 7 = 10$

A)  $t = -1$

B)  $t = 3$

C)  $t = 0$

D)  $t = 1$

124) \_\_\_\_\_

125)  $21 = 5y + 26$

A)  $y = 1$

B)  $y = 5$

C)  $y = -1$

D)  $y = 0$

125) \_\_\_\_\_

126)  $7r + 19 = 19$

A)  $r = 2$

B)  $r = 1$

C)  $r = 0$

D)  $r = -1$

126) \_\_\_\_\_

127)  $10j + 16 = 8j + 20$

A)  $j = 2$

B)  $j = 4$

C)  $j = -4$

D)  $j = -2$

127) \_\_\_\_\_

128)  $-10 + 8y = 13y + 5$

A)  $y = -2$

B)  $y = -3$

C)  $y = 2$

D)  $y = 3$

128) \_\_\_\_\_

129)  $13k + 39 = 0$

A)  $k = -2$

B)  $k = 3$

C)  $k = 2$

D)  $k = -3$

129) \_\_\_\_\_

130)  $g - 9 = 24 - 10g$

A)  $g = 3$

B)  $g = -3$

C)  $g = 12$

D)  $g = -12$

130) \_\_\_\_\_

**Use the distributive property to help solve the given equation.**

131)  $8(z - 6) = 24$

A)  $z = 9$

B)  $z = -6$

C)  $z = 6$

D)  $z = -9$

131) \_\_\_\_\_

132)  $-14 = 7(y + 6)$

A)  $y = -6$

B)  $y = 8$

C)  $y = -8$

D)  $y = 6$

132) \_\_\_\_\_

133)  $-8(m - 8) = 0$

A)  $m = 9$

B)  $m = 0$

C)  $m = -8$

D)  $m = 8$

133) \_\_\_\_\_

134)  $5(w - 14) = -15$

A)  $w = 14$

B)  $w = -11$

C)  $w = 11$

D)  $w = -14$

134) \_\_\_\_\_

**Solve the equation.**

A)  $x = -11$

B)  $x = -6$

C)  $x = 11$

D)  $x = 6$

135) \_\_\_\_\_

136)  $-4 + 10y + 12 = 4(2y - 4) - 6$

A)  $y = -4$

B)  $y = 15$

C)  $y = -15$

D)  $y = 4$

136) \_\_\_\_\_

137)  $-3(2p + 11) - 22 = -2(p + 12) + 9$

A)  $p = 10$

B)  $p = 12$

C)  $p = -10$

D)  $p = -12$

137) \_\_\_\_\_

135)  $3(x - 4) + 7 = -3 + x - 24$

138)  $8x - 11x + 13x = 40 - 16x + 6x$

A)  $x = 3$

B)  $x = -3$

C)  $x = 2$

D)  $x = -2$

138) \_\_\_\_\_

139)  $10x + 5 = 12x - 11$

A)  $x = 8$

B)  $x = 3$

C)  $x = 16$

D)  $x = 2$

139) \_\_\_\_\_



140)  $3x - 8x = -5 - 9x$

A)  $x = \frac{4}{5}$

B)  $x = -\frac{5}{4}$

C)  $x = -\frac{4}{5}$

D)  $x = \frac{5}{4}$

140) \_\_\_\_\_

**Provide an appropriate response.**

141) Identify the variable and the constant in this expression:  $9x - x^2 + 7x^3 + 12$

141) \_\_\_\_\_

A) variable 12; constant x

B) variable x; constant 9x

C) variable  $9x$ ; constant  $7x^3$ 

D) variable x; constant 12

142) Use the variable x to express the following property:

142) \_\_\_\_\_

adding zero to a number leaves the number unchanged.

A)  $\underline{x}$  is undefined.

B)  $x \cdot 1 = x$

C)  $\frac{0}{x} = 0$

D)  $x + 0 = x$

0

x

143) Use the variable x to express the following property:

143) \_\_\_\_\_

Any number divided by zero is undefined.

A)  $x + 0 = x$

B)  $x \cdot 1 = x$

C)  $\frac{x}{0}$  is undefined.

D)  $\frac{0}{x} = 0$

0

x

144) In this expression, which two terms are like terms?  $13xy - 24x + 16 + 9xy + 13x^2y + 13xy^2 + 16y$

144) \_\_\_\_\_

A)  $13xy$  and  $13xy^2$

B)  $13x^2y$  and  $13xy^2$

C)  $13xy$  and  $9xy$

D)  $16$  and  $16x$

145) Which one of the following is an expression?

145) \_\_\_\_\_

A)  $9(x + 2)$

B)  $9(x + 2) = 9x + 18$

C)  $9 \cdot 1 = 9$

D)  $5 + 0 = 5$

B)  $5 + 0 = 5$

C)  $9 \cdot 1 = 9$

D)  $9(x + 2) = 9x + 18$

146) Does this process illustrate the addition property of equality?

146) \_\_\_\_\_

$8x + 5 + 5 = 7(x + 3) - 6$

$8x + 10 = 7(x + 3) - 6$

A) Yes

B) No

147) What property does this process illustrate?

147) \_\_\_\_\_

$13 - 3(x + 9) = 10 - 17x$

$13 - 3x - 27 = 10 - 17x$

A) Division Property of Equality

B) Addition Property of Equality

C) Combining Like Terms

D) Distributive Property

148) What is the next step to solve the following equation for x?

148) \_\_\_\_\_

$-x = 7$

A) Divide both sides by  $-1$ .

B) Divide both sides by 7.

C) Add  $-1$  to both sides.D) Add  $-7$  to both sides.

149) What is the next reasonable step to solve the following equation for x?

149) \_\_\_\_\_

$-21x + 18 = 7x - 22$

A) Combine  $-21x$  and 18.

B) Divide both sides by 18.

C) Combine  $7x$  and  $-22$ .D) Add  $-18$  to both sides.

150) What is the next reasonable step to solve the following equation for x?

150) \_\_\_\_\_

$$22 + 6(x + 7) = 6x - 6$$

- A) Combine  $6x$  and  $-6$ .
- C) Add 22 and 6.

- B) Divide both sides by 22.
- D) Use the distributive property.

## Answer Key

Testname: UNTITLED2

- 1) D
- 2) C
- 3) D
- 4) A
- 5) B
- 6) A
- 7) D
- 8) C
- 9) B
- 10) B
- 11) D
- 12) A
- 13) D
- 14) D
- 15) C
- 16) D
- 17) D
- 18) B
- 19) A
- 20) D
- 21) A
- 22) D
- 23) A
- 24) B
- 25) D
- 26) A
- 27) B
- 28) C
- 29) C
- 30) D
- 31) A
- 32) D
- 33) D
- 34) C
- 35) A
- 36) C
- 37) C
- 38) D
- 39) D
- 40) B
- 41) C
- 42) A
- 43) D
- 44) B
- 45) C
- 46) D
- 47) D
- 48) C
- 49) D
- 50) D

## Answer Key

Testname: UNTITLED2

- 51) A
- 52) D
- 53) C
- 54) C
- 55) A
- 56) C
- 57) B
- 58) C
- 59) D
- 60) D
- 61) B
- 62) A
- 63) D
- 64) B
- 65) C
- 66) D
- 67) D
- 68) D
- 69) A
- 70) D
- 71) A
- 72) B
- 73) C
- 74) B
- 75) C
- 76) D
- 77) B
- 78) C
- 79) B
- 80) B
- 81) A
- 82) A
- 83) B
- 84) B
- 85) D
- 86) B
- 87) B
- 88) C
- 89) D
- 90) D
- 91) A
- 92) A
- 93) A
- 94) D
- 95) B
- 96) A
- 97) C
- 98) C
- 99) A
- 100) C

## Answer Key

Testname: UNTITLED2

- 101) C
- 102) B
- 103) B
- 104) D
- 105) A
- 106) D
- 107) B
- 108) A
- 109) D
- 110) C
- 111) A
- 112) C
- 113) C
- 114) C
- 115) D
- 116) D
- 117) B
- 118) B
- 119) A
- 120) A
- 121) B
- 122) D
- 123) B
- 124) D
- 125) C
- 126) C
- 127) A
- 128) B
- 129) D
- 130) A
- 131) A
- 132) C
- 133) D
- 134) C
- 135) A
- 136) C
- 137) C
- 138) C
- 139) A
- 140) B
- 141) D
- 142) D
- 143) C
- 144) C
- 145) A
- 146) B
- 147) D
- 148) A
- 149) D
- 150) D