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) $t + 12$

A) t is a constant; 12 is a variable.
B) t is a variable; 12 is a constant.
C) t is a variable; 12 is a variable.
D) t is a constant; 12 is a constant.

Answer: B

2) $8k$

A) 8 is a coefficient; k is a constant.
B) 8 is a coefficient; k is a variable.
C) 8 is a constant; k is a variable.
D) 8 is a variable; k is a constant

Answer: B

3) $-20 + t$

A) -20 is a variable; t is a variable.
B) -20 is a constant; t is a constant.
C) -20 is a variable; t is a constant.
D) -20 is a constant; t is a variable.

Answer: D

4) $\frac{a}{b}$

A) a is a variable; b is a constant.
B) a is a variable; b is a variable.
C) a is a constant; b is a variable.
D) a is a constant; b is a constant.

Answer: B

5) $14h + 9$

A) 14 is a coefficient; h is a variable; 9 is a constant.
B) 14 is a coefficient; h is a constant; 9 is a constant.
C) 14 is a coefficient; h is a variable; 9 is a variable.
D) 14 is a variable; h is a variable; 9 is a constant.

Answer: A

6) $-20g$

A) -20 is a variable; g is a constant.
B) -20 is a variable; g is a variable.
C) -20 is a coefficient; g is a variable.
D) -20 is a coefficient; g is a constant.

Answer: C

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 49 minutes.

A) 49 min
B) 34 min
C) 64 min
D) 98 min

Answer: C

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 12 centimeters.

A) 60 cm
B) 72 cm
C) 18 cm
D) 84 cm

Answer: B

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 110 miles were travelled and 5 gallons of gas were used.

A) 22 m/g
B) 44 m/g
C) 115 m/g
D) 105 m/g

Answer: A

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.

A) 32 boxes B) 26 boxes C) 31 boxes D) 21 boxes

Answer: C

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

11)

Value of x	Expression 5x
-7	$5 \cdot -7$ is -35
-5	

A) $5 - 5$ is -25 B) $5 - 5$ is 0 C) $5 \cdot -5$ is -20 D) $5 \cdot -5$ is -25

Answer: D

12)

Value of x	Expression $3x + x$
-6	$3 \cdot -6 + -6$ is -24
2	

A) $3 \cdot 2 \cdot 2$ is 8 B) $3 \cdot 2$ is 8 C) $3 \cdot 2 + 2$ is 8 D) $3 \cdot 2 + 2$ is 10

Answer: C

13)

Value of x	Value of y	Expression $2xy$
7	9	$2 \cdot 7 \cdot 9$ is 126
3	4	

A) $2 \cdot 3 \cdot 4$ is 24 B) $3 \cdot 3 \cdot 4$ is 36 C) $2 \cdot 3 \cdot 3$ is 24 D) $3 \cdot 3 \cdot 4$ is 24

Answer: A

14)

Value of x	Value of y	Expression $-3xy$
6	7	$-3 \cdot 6 \cdot 7$ is -126
2	-4	

A) $-3 \cdot 2 \cdot -4$ is -24 B) $-3 \cdot 2 \cdot 2$ is 24 C) $-3 \cdot 2 \cdot -4$ is 24 D) $-3 \cdot -4 \cdot -4$ is 24

Answer: C

15)

Value of x	Value of y	Expression $-2x + y$
6	7	$-2 \cdot 6 + 7$ is -5
5	4	

A) $-2 \cdot 4 + 5$ is -3 B) $-2 \cdot 4 + 4$ is -4 C) $-2 \cdot 5 + 4$ is -6 D) $-2 \cdot 5 + 5$ is -5

Answer: C

Rewrite the given expression without exponents.

16) t^4

A) $t \cdot t \cdot t \cdot t$ B) $\frac{t}{4}$ C) $t + 4$ D) $t + t + t + t$

Answer: A

17) g^6

A) $g \cdot g \cdot g \cdot g \cdot g \cdot g$

B) $g + 6$

C) $g + g + g + g + g + g$

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

Answer: A

18) w^5z^3

A) $w + w + w + w + w + z + z + z$

B) $w \cdot w \cdot w \cdot w \cdot w \cdot z \cdot z \cdot z$

C) $w \cdot w \cdot w \cdot z \cdot z \cdot z \cdot z \cdot z$

D) $w + w + w + z + z + z + z + z$

Answer: B

19) $-x^2y^4$

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

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

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

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

Answer: D

20) $-6r^3y^2$

A) $-6 \cdot r + r + r + y + y$

B) $-6 \cdot r + r + y + y + y$

C) $-6 \cdot r \cdot r \cdot r \cdot y \cdot y$

D) $-6 \cdot r \cdot r \cdot y \cdot y \cdot y$

Answer: C

21) $16d^3k^4$

A) $16 \cdot d \cdot d \cdot d \cdot k \cdot k \cdot k$

B) $16 \cdot d + d + d + d + k + k + k$

C) $16 \cdot d + d + d + k + k + k + k$

D) $16 \cdot d \cdot d \cdot d \cdot k \cdot k \cdot k \cdot k$

Answer: D

22) $23h^4m^2$

A) $23 \cdot h + h + m + m + m + m$

B) $23 \cdot h + h + h + h + m + m$

C) $23 \cdot h \cdot h \cdot m \cdot m \cdot m \cdot m$

D) $23 \cdot h \cdot h \cdot h \cdot h \cdot m \cdot m$

Answer: D

23) $-30f^3g^5$

A) $-30 \cdot f \cdot f \cdot f \cdot f \cdot g \cdot g \cdot g$

B) $-30 \cdot f + f + f + g + g + g + g + g$

C) $-30 \cdot f \cdot f \cdot f \cdot g \cdot g \cdot g \cdot g \cdot g$

D) $-30 \cdot f + f + f + f + f + g + g + g$

Answer: C

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

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

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

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

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

Answer: A

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

A) $x \cdot x \cdot y \cdot y \cdot y \cdot z \cdot z$

B) $x + x + x + y + y + y + z + z$

C) $x \cdot x \cdot x \cdot y \cdot y \cdot z \cdot z$

D) $x + x + y + y + y + z + z$

Answer: A

Evaluate the given expression.

26) x^3 when x is -3.

A) -6 B) 9 C) -9 D) -27

Answer: D

27) cx^3 when c is 1 and x is -1.

A) 1 B) -3 C) -1 D) 0

Answer: C

28) 5mn when m is 2 and n is 3.

A) -30 B) 30 C) 10 D) 24

Answer: B

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

A) -400 B) 400 C) 500 D) -500

Answer: C

30) $-v^2tw^3$ when v is -4, t is 5, and w is -5.

A) $-10{,}000$ B) 10,000 C) $-12{,}500$ D) 12,500

Answer: B

31) $2x^2yz$ when x is 1, y is -3, and z is -3.

A) -9 B) 18 C) -18 D) 9

Answer: B

Evaluate the expression.

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

A) -10 B) -8 C) 8 D) 10

Answer: C

33) $|xy| + |yz| - |z^2|$; when x is 1, y is -5, and z is 4.

A) -41 B) -26 C) 9 D) 26

Answer: C

34) $\frac{z^2}{-2y + z}$; when y is 8 and z is 16.

A) undefined B) 0 C) -1 D) 256

Answer: A

35) $\frac{y^2}{x + 2y}$; when x is -3 and y is 3.

A) 3 B) -3 C) 0 D) undefined

Answer: A

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

36) $6t^2 + 9t + -5rt + 4t^2$

A) Like Terms: 6 and 4
Coefficients: $6t^2$ and $4t^2$

B) Like Terms: 9t and $-5rt$
Coefficients: 9 and 5

C) Like Terms: $6t^2$ and $4t^2$
Coefficients: 6 and 4

D) Like Terms: $6t^2$ and 9t
Coefficients: 6 and 9

Answer: C

37) $8x^2y + 9xy + -7xy^2 + 12x + 8xy + -8x^2y^3 + 12$

A) Like Terms: 9xy and 8xy
Coefficients: 9 and 8

B) Like Terms: $8x^2y$ and $-7xy^2$
Coefficients: 8 and -7

C) Like Terms: 8xy and 12x
Coefficients: 8 and 12

D) Like Terms: 9 and 8
Coefficients: 9xy and 8xy

Answer: A

38) $2k + 8n + -3k + -3kn + 12$

A) Like Terms: 2k and $-3k$
Coefficients: 2 and -3

B) Like Terms: $-3k$ and $-3kn$
Coefficients: 3 and 3

C) Like Terms: 2 and -3
Coefficients: 2k and $-3k$

D) Like Terms: 8n and $-3kn$
Coefficients: 8 and 12

Answer: A

Simplify the given expression.

39) $10t + 14t$

A) 24t B) $-4t$ C) $-24t$ D) $24t^2$

Answer: A

40) $3mn - 3mn$

A) 0 B) 6mn C) mn D) $-mn$

Answer: A

41) $7y^2 + 7y^2$

A) $-14y^2$ B) $14y^4$ C) 14y D) $14y^2$

Answer: D

42) $25wy^3z - 6wy^3z$

A) $19wy^3z$ B) $19w^2y^6z^2$ C) $31wy^3z$ D) $-19wy^3z$

Answer: A

43) $7hk + 4hk + 3hk$

A) $-14hk$ B) 14hk C) $-14h^2k^2$ D) $14h^2k^2$

Answer: B

44) $4ef + 4ef - 27ef$

A) $19e^2f^2$ B) 19ef C) $-19e^2f^2$ D) $-19ef$

Answer: D

45) $-4z - 6z - 2z$

A) $12z$ B) $12z^2$ C) $-12z$ D) $-12z^2$

Answer: C

Simplify the given expression. Write the answer with variables in alphabetical order and any constant term last.

46) $4s + 12t + 12s$

A) $16t + 12s$ B) $16s + 12t$ C) $-16s + 12t$ D) $16s^2 + 12t$

Answer: B

47) $13 + 5t + 6$

A) $5t - 19$ B) $5t + 19$ C) $5t + 78$ D) $5t^2 + 19$

Answer: B

48) $15xy^2 + 8xy + 10xy^2$

A) $25xy^2 + 8xy$ B) $23xy^2 + 10xy$ C) $25x^2y^4 + 8xy$ D) $25x^2y + 8xy$

Answer: A

49) $-9y^2z + 3xy^2 - 15y^2z + 9$

A) $3xy^2 - 24y^2z + 9$ B) $3xy^2 + 24y^2z + 9$ C) $-3xy^2 + 24y^2z + 9$ D) $-3xy^2 - 24y^2z + 9$

Answer: A

50) $8m^2 + 13m - 12m^2 + 4m$

A) $4m^2 + 17m$ B) $-4m^2 - 17m$ C) $4m^2 - 17m$ D) $-4m^2 + 17m$

Answer: D

51) $-9y^3 + 2y - 13y^2 + 2$

A) $22y^2 - 2y + 2$ B) $-22y^3 + 2y + 2$

C) cannot be simplified D) $-22y^2 + 2y + 2$

Answer: C

52) $-6b + 4a - 5c - 2b + 2a$

A) $6a - 8b$ B) $2a - 8b - 5c$

C) $6a - 8b - 5c$ D) cannot be simplified

Answer: C

Simplify by using the associative property of multiplication.

53) $5(8t)$

A) $-40t$ B) $13t$ C) $-13t$ D) $40t$

Answer: D

54) $-8(5z^3)$

A) $-13z^3$ B) $40z^3$ C) $-40z^3$ D) $13z^3$

Answer: C

55) $3(-8p^2)$

A) $-24p^2$ B) $11p^2$ C) $24p^2$ D) $-11p^2$

Answer: A

56) $-8(-10fg^2)$

A) $-80f^2g^4$ B) $-80fg^2$ C) $80fg^2$ D) $80f^2g^4$

Answer: C

57) $10(10fg^2h)$

A) $-100fg^2h$ B) $-100f^2g^4h^2$ C) $100fg^2h$ D) $100f^2g^4h^2$

Answer: C

58) $-7(-d)$

A) $-7d$ B) $7d$ C) $8d$ D) $-8d$

Answer: B

Use the distributive property to simplify this expression.

59) $5(t + 5)$

A) $5t - 5$ B) $5t + 25$ C) $5t + 5$ D) $5t - 25$

Answer: B

60) $3(z - 9)$

A) $3z + 27$ B) $3z - 27$ C) $3z + 9$ D) $3z - 9$

Answer: B

61) $-4(4k - 2)$

A) $16k + 8$ B) $-16k + 8$ C) $16k - 8$ D) $-16k - 8$

Answer: B

62) $-3(d + 4)$

A) $-3d + 4$ B) $-3d - 12$ C) $-3d + 12$ D) $-3d - 4$

Answer: B

Simplify the given expression.

63) $-5(y + 9) + 10y$

A) $5y + 45$ B) $-5y + 45$ C) $-5y - 45$ D) $5y - 45$

Answer: D

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

A) $7w + 35$ B) $7w - 49$ C) $7w + 49$ D) $7w - 35$

Answer: D

65) $6 + 8(2t + 8)$

A) $6t + 14$ B) $16t + 70$ C) $8t + 14$ D) $8t + 70$

Answer: B

66) $2 + 4(5w + 3) - w$

A) $21w - 14$ B) $19w + 5$ C) $19w + 14$ D) $21w + 14$

Answer: C

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

A) $-14w - 20$ B) $-14w + 20$ C) $14w - 20$ D) $14w + 20$

Answer: B

68) $-2 + 3(-2w + 10) + 4(6w - 1)$

A) $18w - 24$ B) $18w + 24$ C) $-18w - 24$ D) $-18w + 24$

Answer: B

69) $-2(-2^z) - 6 + 6(2^z + 7)$

A) $4z + 36$ B) $16z - 36$ C) $16z + 1$ D) $16z + 36$

Answer: D

70) $-4(-3n) + 6(n - 1) + 2(-3n) + 6 + n$

A) $12n + 1$ B) $12n$ C) $13n$ D) $-13n$

Answer: C

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

71) $y + 3 = 13$

A) 10 B) -16 C) 16 D) -10

Answer: A

72) $y + 8 = -14$

A) 6 B) -6 C) -22 D) 22

Answer: C

73) $z + 11 = 0$

A) 0 B) -11 C) 11 D) 22

Answer: B

Solve the given equation.

74) $w + 9 = 30$

A) $w = 21$ B) $w = 39$ C) $w = -39$ D) $w = -21$

Answer: A

75) $5 = e - 10$

A) $e = 15$ B) $e = -5$ C) $e = 5$ D) $e = -15$

Answer: A

76) $-13 = z + 2$

A) $z = -11$ B) $z = 15$ C) $z = 11$ D) $z = -15$

Answer: D

77) $-5 + h = 11$

A) $h = 16$ B) $h = -6$ C) $h = -16$ D) $h = 6$

Answer: A

78) $y - 13 = 0$

A) $y = 26$ B) $y = 0$ C) $y = 13$ D) $y = -13$

Answer: C

79) $m - 7 = -28$

A) $m = -21$ B) $m = 21$ C) $m = 35$ D) $m = -35$

Answer: A

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

80) $w - 14 = 9$

Solution is 23

A) Balances B) Does not balance

Answer: A

81) $8 + s = 7$

Solution is 15

A) Does not balance B) Balances

Answer: A

82) $-3 = -12 + w$

Solution is 9

A) Balances B) Does not balance

Answer: A

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

83) $p - 12 = -3 + 6$

A) $p = 15$ B) $p = 21$ C) $p = -15$ D) $p = -21$

Answer: A

84) $7 + n = -2 - 14$

A) $n = 23$ B) $n = -23$ C) $n = -9$ D) $n = 9$

Answer: B

85) $14r - 13r = -1 + 14$

A) $r = 15$ B) $r = -15$ C) $r = 13$ D) $r = -13$

Answer: C

86) $-6w - 15 + 7w = -7 + 6$

A) $w = -14$ B) $w = 14$ C) $w = 28$ D) $w = -28$

Answer: B

87) $-6 + 6 = 13 + r$

A) $r = -13$ B) $r = -26$ C) $r = 13$ D) $r = 26$

Answer: A

88) $-4k + 5k = 24 - 3 + 2$

A) $k = -29$ B) $k = 23$ C) $k = -23$ D) $k = 29$

Answer: B

89) $-8 - 4 + 14 = 16y - 15 - 15y + 2$

A) $y = -15$ B) $y = 15$ C) $y = -1$ D) $y = 11$

Answer: B

90) $-2 - 3 + 10 = 12m - 11 - 11m + 4$

A) $m = -12$ B) $m = 12$ C) $m = 13$ D) $m = -1$

Answer: B

91) $-22 - 3 - 2 + 15 = -10 - 4n + 7 + 5n$

A) $n = -29$ B) $n = -15$ C) $n = -9$ D) $n = 9$

Answer: C

92) $-7x + 3x + 5 + 5x = |1 - 7| - |-2 + 1|$

A) $x = 2$ B) $x = 12$ C) $x = 0$ D) $x = 5$

Answer: C

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 115 pounds of ribs this year. Solving the equation $n + 10 = 115$ will give the number of people who signed up for the BBQ. Solve the equation.

A) $n = 10$ people B) $n = 105$ people C) $n = 115$ people D) $n = 125$ people

Answer: B

94) Alex always takes \$5 more than he anticipates needing on a date. Alex takes \$50 on his date with Judith. Solving the equation $d + 5 = 50$ will give you the amount of money Alex anticipates needing for this date. Solve the equation.

A) $d = \$5$ B) $d = \$45$ C) $d = \$50$ D) $d = \$55$

Answer: B

Solve the given equation.

95) $9g = 0$

A) $g = -9$ B) $g = 0$ C) $g = 1$ D) $g = 9$

Answer: B

96) $-11d = 0$

A) $d = -11$ B) $d = 1$ C) $d = 11$ D) $d = 0$

Answer: D

97) $9y = 9$

A) $y = 0$ B) $y = -1$ C) $y = 9$ D) $y = 1$

Answer: D

98) $-5k = 5$

A) $k = 0$ B) $k = -1$ C) $k = 5$ D) $k = 1$

Answer: B

99) $-6m = 18$

A) $m = -12$ B) $m = 3$ C) $m = -3$ D) $m = 0$

Answer: C

100) $16z = -32$

A) $z = -32$ B) $z = -2$ C) $z = 32$ D) $z = 2$

Answer: B

101) $-44 = -11t$

A) $t = 4$ B) $t = -22$ C) $t = 22$ D) $t = -4$

Answer: A

102) $48 = -6w$

A) $w = 48$ B) $w = 8$ C) $w = -48$ D) $w = -8$

Answer: D

Simplify where possible. Then solve the equation.

103) $2t = -3 + 19$

A) $t = -11$ B) $t = -8$ C) $t = 8$ D) $t = 11$

Answer: C

104) $-4 = 5y - y$

A) $y = 1$ B) $y = \frac{2}{3}$ C) $y = -1$ D) $y = -6$

Answer: C

105) $9 - 5 = 2r$

A) $r = -2$ B) $r = -3$ C) $r = 2$ D) $r = 0$

Answer: C

106) $x - 5x = 24$

A) $x = 8$ B) $x = -6$ C) $x = -8$ D) $x = 6$

Answer: B

107) $12 - 12 = 6f - 5f$

A) $f = 1$ B) $f = 0$ C) $f = -1$ D) $f = 12$

Answer: B

108) $5q + 2q = 15 - 5 + 18$

A) $q = -4$ B) $q = -7$ C) $q = 7$ D) $q = 4$

Answer: D

109) $-18d = 0$

A) $d = 1$ B) $d = 0$ C) $d = -18$ D) $d = -1$

Answer: B

110) $-29w + 8w = 6 - 69$

A) $w = -21$ B) $w = 21$ C) $w = -3$ D) $w = 3$

Answer: D

111) $80 - 35 = 5x - 10x$

A) $x = 9$ B) $x = 45$ C) $x = -45$ D) $x = -9$

Answer: D

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

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

A) $w = -3$ B) $w = 3$ C) $w = 16$ D) $w = -16$

Answer: A

113) $-3(-7x) = -21$

A) $x = -3$ B) $x = -7$ C) $x = 7$ D) $x = -1$

Answer: D

114) $96 = -2(-4x)$

A) $x = 88$ B) $x = 12$ C) $x = 768$ D) $x = -12$

Answer: B

115) $12 = 4(-3w)$

A) $w = 1$ B) $w = -1$ C) $w = -12$ D) $w = 12$

Answer: B

Solve the equation.

116) $-x = 5$

A) $x = 1$ B) $x = 5$ C) $x = 0$ D) $x = -5$

Answer: D

117) $-x = -41$

A) $x = 0$ B) $x = 41$ C) $x = 1$ D) $x = -41$

Answer: B

118) $9 = -z$

A) $z = 0$ B) $z = -9$ C) $z = 1$ D) $z = 9$

Answer: B

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) $s = 10$ feet B) $s = 9$ feet C) $s = 36$ feet D) $s = 40$ feet

Answer: B

120) The perimeter of an octagon with sides of equal length is 8 times the length of one side, s. If the perimeter is 104 meters, solving the equation $8s = 104$ will give the length of one side. Solve the equation.

A) $s = 13$ meters B) $s = 52$ meters C) $s = 26$ meters D) $s = 104$ meters

Answer: A

Solve the equation.

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

A) $m = -10$ B) $m = 5$ C) $m = 10$ D) $m = 0$

Answer: C

122) $-8(3x) + 2(13x) = |38 - 38| + |-6 + 28|$

A) $x = -14$ B) $x = 11$ C) $x = 14$ D) $x = -11$

Answer: B

123) $5(8w) - 6w - 10(4w) = |-27 - 27| - 36$

A) $w = -3$ B) $w = 1$ C) $w = -4$ D) $w = 3$

Answer: A

124) $3t + 5 = 8$

A) $t = 3$ B) $t = 1$ C) $t = 0$ D) $t = -1$

Answer: B

125) $19 = 5y + 24$

A) $y = 5$ B) $y = 1$ C) $y = -1$ D) $y = 0$

Answer: C

126) $17r + 7 = 7$

A) $r = 1$ B) $r = 2$ C) $r = 0$ D) $r = -1$

Answer: C

127) $10j + 7 = 8j + 11$

A) $j = -4$ B) $j = -2$ C) $j = 4$ D) $j = 2$

Answer: D

128) $-14 + 2y = 7y + 1$

A) $y = -2$ B) $y = -3$ C) $y = 2$ D) $y = 3$

Answer: B

129) $7k + 21 = 0$

A) $k = -2$ B) $k = 2$ C) $k = -3$ D) $k = 3$

Answer: C

130) $g - 21 = 56 - 10g$

A) $g = 12$ B) $g = -7$ C) $g = 7$ D) $g = -12$

Answer: C

Use the distributive property to help solve the given equation.

131) $2(z - 10) = 6$

A) $z = -13$ B) $z = 10$ C) $z = 13$ D) $z = -10$

Answer: C

132) $-10 = 5(y + 9)$

A) $y = 9$ B) $y = -9$ C) $y = -11$ D) $y = 11$

Answer: C

133) $-7(m - 2) = 0$

A) $m = 2$ B) $m = 0$ C) $m = 3$ D) $m = -2$

Answer: A

134) $2(w - 12) = -6$

A) $w = -12$ B) $w = -9$ C) $w = 12$ D) $w = 9$

Answer: D

Solve the equation.

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

A) $x = -11$ B) $x = 6$ C) $x = -6$ D) $x = 11$

Answer: A

136) $-8 + 10y + 24 = 4(2y - 8) - 10$

A) $y = 29$ B) $y = -4$ C) $y = -29$ D) $y = 4$

Answer: C

137) $-3(2p + 5) - 10 = -2(p + 6) + 3$

A) $p = 4$ B) $p = -6$ C) $p = 6$ D) $p = -4$

Answer: D

138) $13x - 16x + 18x = 60 - 26x + 11x$

A) $x = -3$ B) $x = 3$ C) $x = 2$ D) $x = -2$

Answer: C

139) $10x + 3 = 12x - 11$

A) $x = 2$ B) $x = 14$ C) $x = 4$ D) $x = 7$

Answer: D

140) $7x - 6x = -5 - 7x$

A) $x = -\frac{5}{8}$ B) $x = \frac{5}{8}$ C) $x = \frac{8}{5}$ D) $x = -\frac{8}{5}$

Answer: A

Provide an appropriate response.

141) Identify the variable and the constant in this expression: $8x - x^2 + 2x^3 + 11$

A) variable x; constant 11 B) variable x; constant 8x

C) variable 8x; constant $2x^3$ D) variable 11; constant x

Answer: A

142) Use the variable x to express the following property:
adding zero to a number leaves the number unchanged.

A) $x + 0 = x$ B) $\frac{x}{0}$ is undefined. C) $x \cdot 1 = x$ D) $\frac{0}{x} = 0$

Answer: A

143) Use the variable x to express the following property:
Any number divided by zero is undefined.

A) $\frac{x}{0}$ is undefined. B) $\frac{0}{x} = 0$ C) $x + 0 = x$ D) $x \cdot 1 = x$

Answer: A

144) In this expression, which two terms are like terms? $2xy - 10x + 5 + 16xy + 2x^2y + 2xy^2 + 5y$

A) 5 and 5x B) 2xy and 16xy C) 2xy and $2xy^2$ D) $2x^2y$ and $2xy^2$

Answer: B

145) Which one of the following is an expression?
$9(x + 9)$ $9(x + 9) = 9x + 81$ $10 \cdot 1 = 10$ $23 + 0 = 23$
A) $9(x + 9) = 9x + 81$ B) $10 \cdot 1 = 10$ C) $23 + 0 = 23$ D) $9(x + 9)$
Answer: D

146) Does this process illustrate the addition property of equality?
$20x + 7 + 3 = 2(x + 5) - 7$
$20x + 10 = 2(x + 5) - 7$
A) No B) Yes
Answer: A

147) What property does this process illustrate?
$4 - 3(x + 8) = 6 - 2x$
$4 - 3x - 24 = 6 - 2x$
A) Division Property of Equality B) Combining Like Terms
C) Distributive Property D) Addition Property of Equality
Answer: C

148) What is the next step to solve the following equation for x?
$-x = 15$
A) Divide both sides by -1. B) Add -1 to both sides.
C) Add -15 to both sides. D) Divide both sides by 15.
Answer: A

149) What is the next reasonable step to solve the following equation for x?
$-18x + 7 = 20x - 12$
A) Combine $20x$ and -12. B) Divide both sides by 7.
C) Combine $-18x$ and 7. D) Add -7 to both sides.
Answer: D

150) What is the next reasonable step to solve the following equation for x?
$19 + 3(x + 6) = 15x - 16$
A) Use the distributive property. B) Combine $15x$ and -16.
C) Divide both sides by 19. D) Add 19 and 3.
Answer: A