Test Bank for Introductory Algebra 13th Bittinger

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Exam

Name_____

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

Decide if the given number is a solution to the given equation.

1) $2x = 12;\ 8$ 1) _____
A) Yes B) No

2) $\frac{x}{5} = 9; 45$ 2) _____
A) No B) Yes

3) $p + 12 = 16;\ 4$ 3) _____
A) Yes B) No

4) $p - 1 = 6;\ 7$ 4) _____
A) Yes B) No

5) $2m + 5 = 13;\ 3$ 5) _____
A) Yes B) No

6) $6p + 4p - 8 = 12;\ 2$ 6) _____
A) No B) Yes

Solve the equation using the addition principle.

7) $s - 6 = -4$ 7) _____
A) -10 B) 2 C) 10 D) -2

8) $x + 4 = 8$ 8) _____
A) 12 B) 4 C) -4 D) -12

9) $7 = x + 4$ 9) _____
A) -3 B) -11 C) 3 D) 11

10) $21 = a - 26$ 10) _____
A) -5 B) 5 C) 47 D) -47

11) $m - 10.67 = 0$ 11) _____
A) 10.67 B) 9.67 C) -9.67 D) -10.67

12) $-8 + s = 11$ 12) _____
A) -3 B) 3 C) -19 D) 19

13) $25 = -10 + b$ 13) _____
A) -15 B) -35 C) 15 D) 35

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14) $-12.5 = 28.9 + a$ 14) _____

A) 16.4 B) 41.4 C) −41.4 D) −16.4

15) $\frac{1}{4} + x = 9$ 15) _____

A) 35 B) $\frac{37}{4}$ C) 2 D) $\frac{35}{4}$

16) $x + \frac{1}{2} = \frac{5}{6}$ 16) _____

A) $\frac{2}{3}$ B) $\frac{1}{3}$ C) 2 D) $\frac{4}{3}$

17) $t - \frac{2}{11} = \frac{6}{11}$ 17) _____

A) 4 B) $\frac{4}{11}$ C) $\frac{8}{11}$ D) $\frac{5}{11}$

18) $k + 1\frac{1}{3} = 2\frac{1}{3}$ 18) _____

A) 1 B) 3 C) $\frac{11}{3}$ D) 2

19) $x - \frac{8}{19} = -\frac{3}{19}$ 19) _____

A) $\frac{5}{19}$ B) $\frac{11}{19}$ C) $-\frac{5}{19}$ D) $-\frac{11}{19}$

Solve using the multiplication principle.

20) $6x = 48$ 20) _____

A) 42 B) 8 C) 288 D) $\frac{1}{8}$

21) $18 = 3x$ 21) _____

A) 15 B) 54 C) $\frac{1}{6}$ D) 6

22) $-x = 9$ 22) _____

A) 10 B) −9 C) 9 D) $\frac{1}{9}$

23) $2a = -6$ 23) _____

A) 8 B) −3 C) −8 D) 1

24) $72 = -9k$ 24) _____

A) 81 B) −8 C) 1 D) −81

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25) $-8x = -24$ 25) _____

A) 16 B) 3 C) −16 D) 2

26) $-3b = 51$ 26) _____

A) 1 B) −17 C) −54 D) 54

27) $-77 = 7z$ 27) _____

A) −11 B) 84 C) 1 D) −84

28) $-60 = -5n$ 28) _____

A) 12 B) 2 C) −55 D) 55

29) $-5s = -55$ 29) _____

A) −50 B) 50 C) 2 D) 11

30) $\frac{x}{7} = 13$ 30) _____

A) 78 B) 20 C) 91 D) 84

31) $\frac{-t}{3} = 20$ 31) _____

A) −40 B) −23 C) −60 D) −57

32) $\frac{m}{-5} = 26$ 32) _____

A) −130 B) −31 C) −104 D) −125

33) $\frac{1}{4}x = 24$ 33) _____

A) 96 B) 92 C) 28 D) 72

34) $-\frac{1}{2}y = 14$ 34) _____

A) −28 B) −26 C) −16 D) −14

35) $\frac{2}{3}x = 14$ 35) _____

A) $\frac{28}{3}$ B) $\frac{44}{3}$ C) 21 D) $\frac{40}{3}$

36) $-\frac{5}{9}k = -10$ 36) _____

A) 4 B) −2 C) 3 D) 18

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37) $\frac{5}{12} = \frac{6}{7}x$ 37) _____

A) $\frac{14}{5}$ B) $\frac{72}{35}$ C) $\frac{5}{14}$ D) $\frac{35}{72}$

38) $-\frac{1}{8}z = \frac{1}{9}$ 38) _____

A) $-\frac{9}{8}$ B) $-\frac{8}{9}$ C) $-8\frac{1}{9}$ D) $\frac{8}{9}$

39) $-\frac{8}{9}m = -\frac{1}{4}$ 39) _____

A) $-\frac{9}{4}$ B) $\frac{32}{9}$ C) $\frac{9}{32}$ D) $-\frac{9}{32}$

40) $\frac{16}{5}x = -\frac{16}{21}$ 40) _____

A) $-\frac{12}{35}$ B) $-\frac{35}{12}$ C) $-\frac{15}{7}$ D) $-\frac{5}{21}$

41) $-\frac{16}{9}y = -\frac{8}{21}$ 41) _____

A) $\frac{32}{21}$ B) $\frac{6}{7}$ C) $\frac{3}{14}$ D) $\frac{21}{32}$

42) $7.4x = 66.6$ 42) _____

A) 59.2 B) $\frac{1}{9}$ C) 57.6 D) 9

43) $19.2 = 2.4y$ 43) _____

A) 8 B) 16.8 C) $\frac{1}{8}$ D) 11.2

44) $-3.9y = 23.4$ 44) _____

A) -19.5 B) -17.4 C) $-\frac{1}{6}$ D) -6

45) $8.2t = -24.6$ 45) _____

A) -16.4 B) -21.6 C) $-\frac{1}{3}$ D) -3

46) $-19.6 = 2.8z$ 46) _____

A) $-\frac{1}{7}$ B) -7 C) -12.6 D) -16.8

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47) $-5.4m = -32.4$ 47) _____

A) 27 B) $\frac{1}{6}$ C) 26.4 D) 6

48) $12.6x = 25.2$ 48) _____

A) 23.2 B) $\frac{1}{2}$ C) 2 D) 12.6

49) $-24.5y = 171.5$ 49) _____

A) -7 B) -147 C) -164.5 D) $-\frac{1}{7}$

50) $14.9t = -149$ 50) _____

A) -10 B) -139 C) $-\frac{1}{10}$ D) -134.1

51) $-17.7m = -141.6$ 51) _____

A) 8 B) 133.6 C) $\frac{1}{8}$ D) 123.9

52) $\frac{1}{2}b = -3.56$ 52) _____

A) -1.56 B) -1.00 C) -2.56 D) -7.12

53) $-\frac{6}{7}x = -29.04$ 53) _____

A) 33.88 B) 22.04 C) 27.88 D) 37.16

54) $-\frac{7}{8}x = 33.18$ 54) _____

A) -37.92 B) -30.92 C) -51.26 D) -25.18

Solve.

55) $3r + 8 = 38$ 55) _____

A) 27 B) 4 C) 31 D) 10

56) $2n - 3 = 15$ 56) _____

A) 16 B) 20 C) 9 D) 10

57) $31 = 7x - 4$ 57) _____

A) 5 B) 8 C) 32 D) 28

58) $192 = 10x + 12$ 58) _____

A) 7 B) 18 C) 174 D) 170

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59) $6x + 5 = -43$ 59) _____

A) $-\frac{19}{3}$ B) -54 C) -7 D) -8

60) $5 + 6p = -7$ 60) _____

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

61) $-8x - 15 = -135$ 61) _____

A) -112 B) -15 C) $\frac{75}{4}$ D) 15

62) $-10n - 9 = 61$ 62) _____

A) -60 B) -7 C) 7 D) 64

63) $--1 = -2x + 9$ 63) _____

A) 10 B) 4 C) -4 D) 6

64) $\frac{1}{4}f - 4 = 1$ 64) _____

A) 15 B) -15 C) 20 D) -20

65) $\frac{1}{2}a - \frac{1}{2} = -6$ 65) _____

A) -13 B) 13 C) 11 D) -11

66) $3x + 2x = 25$ 66) _____

A) 20 B) $\frac{25}{6}$ C) 5 D) $\frac{25}{3}$

67) $-6x - 2x = 48$ 67) _____

A) -5 B) -6 C) 56 D) 6

68) $10y - 8 = 6y$ 68) _____

A) $-\frac{1}{2}$ B) 2 C) -2 D) $\frac{1}{2}$

69) $5x + 4 = 3x + 18$ 69) _____

A) 9 B) 7 C) $\frac{11}{4}$ D) $\frac{7}{4}$

70) $5x - 7 = 89 - 7x$ 70) _____

A) 8 B) -8 C) -41 D) -48

71) $6y - 6 = 14 + y$ 71) _____

A) $\frac{8}{7}$ B) $\frac{20}{7}$ C) 4 D) $\frac{8}{5}$

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72) $10 - 8x = 9x - 7x - 50$ 72) _____

A) 5 B) $\frac{20}{3}$ C) $\frac{25}{3}$ D) 6

73) $-3a + 5 + 4a = 5 - 30$ 73) _____

A) −30 B) −40 C) 40 D) 30

74) $-6b + 3 + 4b = -3b + 8$ 74) _____

A) −8 B) 8 C) 5 D) −3

75) $4x - 6 + 5x = 2x + 21 - 2x$ 75) _____

A) 4 B) 3 C) 2 D) 5

Solve. Clear fractions first.

76) $\frac{1}{4}y + 1 = 15$ 76) _____

A) −58 B) 58 C) 56 D) −56

77) $\frac{4}{3}y - 60 = -20$ 77) _____

A) 2 B) −30 C) 30 D) 60

78) $x + \frac{1}{2}x = 12$ 78) _____

A) 8 B) 11 C) 24 D) 4

79) $\frac{2}{5}x - \frac{1}{3}x = 5$ 79) _____

A) 150 B) 75 C) −150 D) −75

80) $\frac{1}{3}r + 2 = \frac{1}{6}r + \frac{4}{3}$ 80) _____

A) −12 B) 4 C) −4 D) 3

81) $\frac{7}{8} + \frac{1}{9}x = 10$ 81) _____

A) $\frac{27}{8}$ B) $\frac{657}{8}$ C) $\frac{639}{8}$ D) $\frac{8}{3}$

82) $\frac{4}{5} + 4y = 5y - \frac{3}{20}$ 82) _____

A) $\frac{19}{180}$ B) $\frac{13}{20}$ C) $\frac{7}{20}$ D) $\frac{19}{20}$

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83) $\frac{2}{3}x - \frac{1}{3}x = \frac{2}{9}x + 1$ 83) _____

A) $\frac{1}{3}$ B) $\frac{9}{5}$ C) $\frac{27}{14}$ D) 9

84) $x + \frac{1}{3} + \frac{5}{8}x = \frac{7}{2} + \frac{1}{4}x$ 84) _____

A) $\frac{76}{35}$ B) $\frac{83}{33}$ C) $\frac{11}{5}$ D) $\frac{76}{33}$

85) $\frac{15}{14}x + \frac{1}{14}x = 3x + \frac{1}{7} + \frac{13}{14}x$ 85) _____

A) $-\frac{2}{39}$ B) $\frac{1}{39}$ C) $-\frac{1}{39}$ D) $\frac{2}{45}$

Solve.

86) $3.2x + 5.9x = 145.6$ 86) _____

A) 15 B) 17 C) 16 D) 18

87) $13.2y - 3.2y = 150$ 87) _____

A) 17 B) 15 C) 16 D) 14

88) $4.9x - 12.4x = -97.5$ 88) _____

A) 14 B) 15 C) 13 D) 12

Solve. Clear decimals first.

89) $7.5t + 45 = 4.5t + 27$ 89) _____

A) 6 B) −12 C) 12 D) −6

90) $1.4x + 1.8 = -71.1 + 9.5x$ 90) _____

A) −81 B) 9 C) 7.8 D) 7.7

91) $1.2y - 3.1 = 0.4y - 1.98$ 91) _____

A) 1.54 B) 1.5 C) −0.714 D) 1.4

92) $-8.1q + 1.1 = -31.9 - 1.5q$ 92) _____

A) 5 B) 4.3 C) −40 D) 4.1

93) $17.4y - 139.2 = 40.6y - 324.8$ 93) _____

A) −32 B) −8 C) 8 D) 32

94) $2.34x + 18.72 = 5.85x + 46.8$ 94) _____

A) 8 B) 24 C) −24 D) −8

95) $10.99t - 76.93 = 7.85t - 54.95$ 95) _____

A) −7 B) 14 C) −14 D) 7

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96) $10.86y - 97.74 + 7.24y = 3.62y - 32.58 + 65.16$ 96) _____

A) -9 B) -36 C) 9 D) 36

Solve.

97) $5(x - 20) = 10$ 97) _____

A) 20 B) 22 C) 10 D) 18

98) $6x - (2x - 1) = 2$ 98) _____

A) $-\frac{1}{8}$ B) $-\frac{1}{4}$ C) $\frac{1}{4}$ D) $\frac{1}{8}$

99) $4(5x - 1) = 16$ 99) _____

A) $\frac{3}{4}$ B) $\frac{17}{20}$ C) 1 D) $\frac{3}{5}$

100) $3(2z - 3) = 5(z + 4)$ 100) _____

A) 29 B) 11 C) -11 D) 14

101) $\frac{1}{2}(6x - 10) = \frac{1}{3}(15x - 9)$ 101) _____

A) 1 B) -15 C) -1 D) $\frac{1}{15}$

102) $(y - 7) - (y + 4) = 6y$ 102) _____

A) $-\frac{11}{6}$ B) $-\frac{11}{4}$ C) $-\frac{1}{2}$ D) $-\frac{3}{4}$

103) $5(8x - 20) = 4(25x - 10)$ 103) _____

A) -7 B) $\frac{1}{7}$ C) 1 D) -1

104) $3(x + 5) + 7 = 6(x + 2) + 10$ 104) _____

A) 16 B) 0 C) 4 D) 10

105) $11 - 4(x + 3) = 12 - 5(x + 2)$ 105) _____

A) 7 B) 17 C) 3 D) 12

106) $2[3 - 3(x + 1)] + 1 = 2(-9 - x) + 2x + 9$ 106) _____

A) 0 B) 5 C) $\frac{5}{6}$ D) $\frac{5}{3}$

107) $0.9(5x + 15) = 2.5 - (x + 3)$ 107) _____

A) $-\frac{28}{11}$ B) $-\frac{61}{23}$ C) $\frac{38}{7}$ D) $\frac{19}{55}$

108) $5.3(x + 3.7) - 7.3 = 6(x + 3) - 8$ 108) _____

A) 9.3 B) 21.3 C) 15.3 D) 3.3

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109) $8.9 - 5.9(x + 3.1) = 7 - 4(x + 5)$ 109) _____

A) 19.9 B) 11.9 C) 1.9 D) 15.9

110) $3x - 4 + 5x - 4 = 5x + 3x + 8$ 110) _____

A) All real numbers B) No solution
C) 8 D) 0

111) $-12 + x = x - 12$ 111) _____

A) 0 B) 24
C) All real numbers D) No solution

112) $2(x + 4) - (2x + 8) = 0$ 112) _____

A) 0 B) 4
C) No solution D) All real numbers

113) $5(2f - 31) = 10f - 155$ 113) _____

A) 0 B) All real numbers
C) No solution D) 1

114) $3(4g + 39) - 12g - 117 = 0$ 114) _____

A) 4 B) -4
C) All real numbers D) No solution

115) $6k + 72 = 3(2k + 23)$ 115) _____

A) 2 B) No solution
C) -2 D) All real numbers

116) $-25s + 18 + 5(5s - 3) = 0$ 116) _____

A) 1 B) No solution
C) 5 D) All real numbers

117) $2[3 - (2 - 5r)] - r = -4 + 3(2 + 3r)$ 117) _____

A) -2 B) No solution
C) All real numbers D) 4

Evaluate the formula for the given values of the variables.

118) $P = 2L + 2W$; $L = 9$ in., $W = 8$ in. 118) _____

A) $P = 17$ in. B) $P = 288$ in. C) $P = 34$ in. D) $P = 144$ in.

119) $d = rt$; $r = 54$ miles per hour, $t = 3$ hours 119) _____

A) $d = 324$ miles B) $d = 162$ miles C) $d = 57$ miles D) $d = 18$ miles

120) When all n teams in a league play every other team twice, a total of N games are played, where $N = n^2 - n$. A basketball league has 8 teams and all teams play each other twice. How many games are played? 120) _____

A) 56 games B) 8 games C) 24 games D) 72 games

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Solve.

121) $A = \frac{1}{2}bh$ for h 121) _____

A) $h = \frac{Ab}{2}$ B) $h = \frac{b}{2A}$ C) $h = \frac{2A}{b}$ D) $h = \frac{A}{2b}$

122) $V = \frac{1}{3}Bh$ for h 122) _____

A) $h = \frac{3B}{V}$ B) $h = \frac{B}{3V}$ C) $h = \frac{3V}{B}$ D) $h = \frac{V}{3B}$

123) $F = \frac{9}{5}C + 32$ for C 123) _____

A) $C = \frac{9}{5}(F - 32)$ B) $C = \frac{5}{F - 32}$ C) $C = \frac{5}{9}(F - 32)$ D) $C = \frac{F - 32}{9}$

124) $a + b = s + r$ for s 124) _____

A) $s = r(a + b)$ B) $s = \frac{a}{r} + b$ C) $s = \frac{a + b}{r}$ D) $s = a + b - r$

125) $x = \frac{w + y + z}{5}$ for y 125) _____

A) $y = x - w - z - 5$ B) $y = 5x + w + z$
C) $y = 5x - w - z$ D) $y = 5x - 5w - 5z$

126) $V = 17s^3$ for s^3 126) _____

A) $s^3 = \frac{V}{17}$ B) $s^3 = \frac{17}{V}$ C) $s^3 = 17V$ D) $s^3 = V - 17$

Solve the problem. Round to the nearest hundredth, if necessary.

127) What is 10% of 700? 127) _____

A) 0.7 B) 7 C) 700 D) 70

128) What is 5% of 400? 128) _____

A) 200 B) 20 C) 0.2 D) 2

129) What is 38% of 1886? 129) _____

A) 71.67 B) 71,668 C) 716.68 D) 7166.8

130) What is 84% of 300? 130) _____

A) 25.2 B) 25,200 C) 2520 D) 252

131) What number is 8.8% of 46? 131) _____

A) 0.41 B) 40.5 C) 4.05 D) 405

132) What number is 3000% of 246? 132) _____

A) 738,000 B) 738 C) 7380 D) 73,800

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133) What number is 130% of 401? 133) _____

A) 52.13 B) 52,130 C) 5213 D) 521.3

134) 63 is 90% of what number? 134) _____

A) 7 B) 700 C) 56.7 D) 70

135) 15 is 3% of what number? 135) _____

A) 45 B) 500 C) 50 D) 5000

136) 49% of what number is 67? 136) _____

A) 73 B) 0.73 C) 136.73 D) 1367.3

137) 50% of what number is 57? 137) _____

A) 28.5 B) 11.4 C) 114 D) 1140

138) 75 is 127% of what number? 138) _____

A) 16,129 B) 59.06 C) 590.6 D) 161.29

Solve the problem. Round to the nearest tenth of a percent.

139) 932 is what percent of 1627? 139) _____

A) 174.6% B) 0.6% C) 57.3% D) 0.1%

140) 971 is what percent of 790? 140) _____

A) 122.9% B) 1.2% C) 0.1% D) 81.4%

141) 4.4 is what percent of 16.5? 141) _____

A) 3.8% B) 375.0% C) 0.3% D) 26.7%

142) What percent of 2413 is 23? 142) _____

A) 9.5% B) 19.5% C) 1.0% D) 10,491.3%

143) What percent of 7 is 0.02? 143) _____

A) 28.6% B) 350.0% C) 0.3% D) 2.9%

144) What percent of 179 is 10.6? 144) _____

A) 0.1% B) 1688.7% C) 5.9% D) 0.2%

145) What percent of 46 is 619? 145) _____

A) 134.6% B) 0.7% C) 0.1% D) 1345.7%

146) 59.2 is what percent of 8? 146) _____

A) 7400.0% B) 13.5% C) 740.0% D) 1.4%

147) What percent of 39 is 39? 147) _____

A) 100% B) 1% C) 0% D) 200%

148) What percent of 90 is 45? 148) _____

A) 0% B) 200% C) 2% D) 50%

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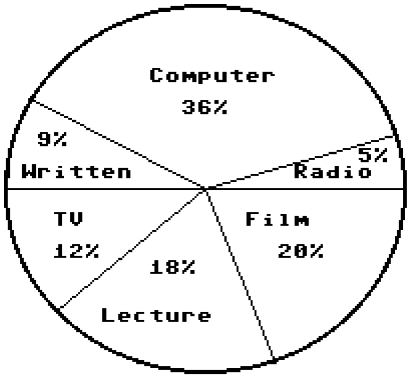
Answer the question.

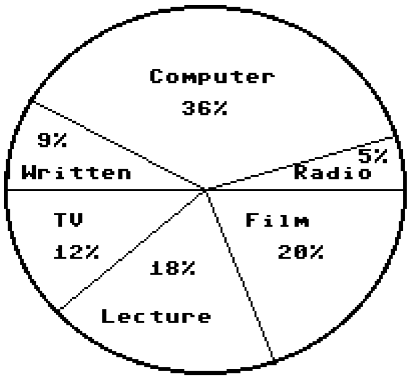
149) In a school survey, students showed these preferences for instructional materials. Answer the questi 149) _____



About how many students would you expect to prefer computers in a school of 750 students?

A) About 135 students
B) About 36 students
C) About 270 students
D) About 150 students

150) In a school survey, students showed these preferences for instructional materials. Answer the questi 150) _____



About how many students would you expect to prefer written materials in a school of 700 students?

A) About 126 students
B) About 252 students
C) About 9 students
D) About 63 students

Solve the problem.

151) The parking lot at a grocery store has 50 cars in it. 72% of the cars are blue. How many cars are blue? 151) _____

A) 36 cars
B) 360 cars
C) 7 cars
D) 69 cars

152) A chemical solution contains 3% salt. How much salt is in 2 mL of solution? 152) _____

A) 66.667 mL
B) 0.6 mL
C) 0.06 mL
D) 6.667 mL

153) During one year, the Larson's real estate bill included $556 for local schools. Of this amount, $160 went to the high school district. What percent did the Larsons pay to the high school district? (Round answer to two decimal places.) 153) _____

A) 28.60%
B) 28.78%
C) 71.22%
D) 16.00%

154) During one year, the Green's real estate bill included $314 for city services. The fire department received 48% of that amount. How much money went to the fire department? 154) _____

A) $130.72
B) $52.00
C) $15.07
D) $150.72

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155) During one year, the Cheung's real estate bill included $200 for county services. Of this amount, $ 44 went to the highway department. What percent did the county highway department receive? (Round answer to two decimal places.) 155) _____

A) 22.00% B) 21.50% C) 78.00% D) 4.40%

156) During one year, the Schmidt's real estate bill included $296 for miscellaneous services. Of this amount, 44% went to the library fund. How much money did the library receive? 156) _____

A) $100.64 B) $85.14 C) $110.24 D) $130.24

157) Sarah left a 15% tip of $6.15 for a meal. What was the cost of the meal before the tip? 157) _____

A) $12.30 B) $47.15 C) $0.92 D) $41.00

158) Andy left a 15% tip for a meal that cost $48. What was the total cost of the meal including the tip? 158) _____

A) $7.20 B) $62.40 C) $55.20 D) $40.80

159) Jennifer's annual salary increased from $24,000 to $49,000 over the last five years. Find the percent increase in her salary during this time period. Round to the nearest tenth of a percent. 159) _____

A) 1.0% B) 51.0% C) 104.2% D) 10.4%

160) On a biology test, a student got 25 questions correct but did not pass. On a second attempt, the student got 36 questions correct. What was the percent of increase? 160) _____

A) 44% B) 11% C) 56% D) 30.6%

161) Sales of frozen pizza for a club fund–raiser increased from 500 one year to 690 the next year. What was the percent of increase? 161) _____

A) 72.5% B) 62% C) 27.5% D) 38%

162) By switching service providers, a family's telephone bill decreased from about $50 a month to about $44. What was the percent of decrease? 162) _____

A) 12% B) 6% C) 13.6% D) 13%

163) Jennifer's annual salary was $22,000 last year and increased 33% this year. Find Jennifer's current annual salary. 163) _____

A) $25,740 B) $7260 C) $36,520 D) $29,260

164) The price of a printer was reduced from $400 to $240. What was the percent of decrease? 164) _____

A) 66.7% B) 45% C) 60% D) 40%

165) The normal gasoline mileage of a car is 44 mpg. On a smooth road, its mileage is 12% higher. What is its mileage on a smooth road? Round your answer to the nearest tenth. 165) _____

A) 44 mpg B) 50 mpg C) 5.3 mpg D) 49.3 mpg

166) Brand X copier has improved its copier so that it produces 14% more copies than its old model. If the old model ran 551 copies per hour, how many copies would the new model run? Round your answer to the nearest whole number. 166) _____

A) 613 copies per hour B) 566 copies per hour

C) 296 copies per hour D) 628 copies per hour

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167) After spending $3350 for tables and $3750 for chairs a convention center manager finds that the furniture cost 5% more than last year. Find the amount that he spent last year on tables and chairs. Round your answer to the nearest dollar. 167) _____

A) $355 B) $7474 C) $6762 D) $3947

168) Midtown Antiques has found that sales have decreased 5% from last year. Sales this year are $ 166,770. Find the amount of last year's sales. Round your answer to the nearest dollar. 168) _____

A) $175,537 B) $176,547 C) $175,547 D) $175,447

169) One half of a number is 3 more than one–sixth the same number. What is the number? 169) _____

A) 8 B) 9 C) 18 D) 12

170) The sum of two consecutive integers is –289. Find the larger integer. 170) _____

A) –146 B) –145 C) –143 D) –144

171) The sum of three consecutive integers is 549. Find the integers. 171) _____

A) 183, 184, 185 B) 181, 183, 185 C) 182, 183, 184 D) 181, 182, 183

172) The sum of three consecutive even integers is 258. Find the integers. 172) _____

A) 88, 90, 92 B) 86, 88, 90 C) 84, 86, 88 D) 79, 80, 81

173) If three times the smaller of two consecutive integers is added to four times the larger, the result is 109. Find the smaller integer. 173) _____

A) 45 B) 14 C) 16 D) 15

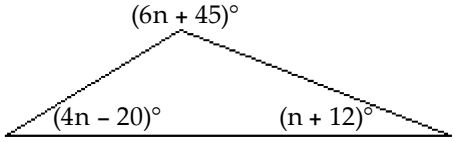
174) If the first and third of three consecutive odd integers are added, the result is 45 less than five times the second integer. Find the third integer. 174) _____

A) 30 B) 15 C) 13 D) 17

175) Two angles of a triangle are 10° and 20°. What is the measure of the third angle? 175) _____

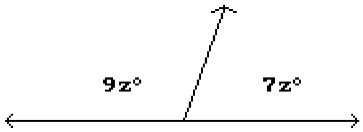
A) 60° B) 330° C) 150° D) 30°

176) Find the measure of each angle in the triangle. 176) _____



A) 52°, 78°, 13° B) 32°, 33°, 25° C) 32°, 123°, 25° D) 58°, 123°, 25°

177) Find the measures of the supplementary angles. 177) _____



A) 96.25° and 83.75° B) 202.5° and 157.5°
C) 101.25° and 78.75° D) 50.63° and 39.38°

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178) Find the length of a rectangular lot with a perimeter of 112 meters if the length is 8 meters more than the width. (P = 2L + 2W) 178) _____

A) 24 m B) 56 m C) 64 m D) 32 m

179) A square plywood platform has a perimeter which is 6 times the length of a side, decreased by 6. Find the length of a side. 179) _____

A) 3 B) 5 C) 2 D) 1

180) A rectangular Persian carpet has a perimeter of 192 inches. The length of the carpet is 24 inches more than the width. What are the dimensions of the carpet? 180) _____

A) 36 in., 60 in. B) 84 in., 108 in. C) 60 in., 84 in. D) 72 in., 96 in.

181) A pie–shaped (triangular) lake–front lot has a perimeter of 1900 feet. One side is 300 feet longer than the shortest side, while the third side is 400 feet longer than the shortest side. Find the lengths of all three sides. 181) _____

A) 500 ft, 800 ft, 900 ft B) 500 ft, 500 ft, 500 ft

C) 400 ft, 700 ft, 800 ft D) 100 ft, 200 ft, 300 ft

182) If Gloria received a 6 percent raise and is now making $24,380 a year, what was her salary before the raise? Round to the nearest dollar if necessary. 182) _____

A) $22,917 B) $24,000 C) $22,380 D) $23,000

183) Stevie bought a stereo for $280 and put it on sale at his store at a 60% markup rate. What was the retail price of the stereo? Round to the nearest cent if necessary. 183) _____

A) $380.00 B) $348.00 C) $448.00 D) $560.00

184) On Monday, an investor bought 100 shares of stock. On Tuesday, the value of the shares went up 8%. How much did the investor pay for the 100 shares if he sold them Wednesday morning for $1404? Round to the nearest dollar if necessary. 184) _____

A) $1292 B) $1354 C) $1350 D) $1300

185) At the end of the day, a storekeeper had $1144 in the cash register, counting both the sale of goods and the sales tax of 4%. Find the amount that is the tax. Round to the nearest dollar if necessary. 185) _____

A) $44 B) $46 C) $35 D) $49

186) Brand X copier advertises that its copiers run 10% longer between service calls than its competitor. If Brand X copiers run 50,700 copies between service calls, how many copies would the competitor run (to the nearest copy)? 186) _____

A) 55,770 copies B) 46,091 copies C) 45,630 copies D) 26,684 copies

187) A high school graduating class is made up of 477 students. There are 89 more girls than boys. How many boys are in the class? 187) _____

A) 283 boys B) 194 boys C) 89 boys D) 477 boys

188) A baseball team played 172 complete games last season. They had 50 fewer wins than losses. How many games did the team win? 188) _____

A) 111 games B) 50 games C) 61 games D) 172 games

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189) On a road trip from Boston to Miami, Joe stopped in Baltimore which is 390 miles from Boston. If Baltimore is 0.26 of the trip to Miami, how far is it from Boston to Miami? 189) _____

A) 416 miles B) 1500 miles C) 101 miles D) 1014 miles

190) Every basketball season Jill competes in a free throw contest. This year Jill was successful at 0.75 of her free throws. If she succeeded at 9 free throws, how many free throws did she attempt? 190) _____

A) 68 free throws B) 12 free throws
C) 900.75 free throws D) 6.75 free throws

191) CopyMart charges $27 plus 48¢ per copy to produce promotional brochures. How many brochures can Steve purchase if he has a budget of $99.00? (Hint: 48¢ = $0.48) 191) _____

A) 47 brochures B) 150 brochures C) 17 brochures D) 160 brochures

192) Recently, the cost of 18 6–oz jars of baby food was $11.52. What was the cost of one jar? 192) _____

A) $1.92 B) $1.28 C) $0.32 D) $0.64

Solve.

193) The height of the tallest building in Anne's home town is 671 feet, which is about 310 feet taller than the tallest building in Laurie's home town. What is the height of the tallest building in Laurie's home town? 193) _____

A) 981 ft B) 474 ft C) 310 ft D) 361 ft

194) The area of Mark's backyard is about 5 times the area of Jon's backyard. The area of Mark's backyard is 3795 ft^2. What is the area of Jon's backyard? 194) _____

A) 872 ft^2 B) 759 ft^2 C) 3795 ft^2 D) 3790 ft^2

195) A city government budgeted $36.4 million for public transportation. This was $15.2 million more than was budgeted for parks and recreation. How much was budgeted for parks and recreation? 195) _____

A) $25.2 million B) $22.2 million C) $21.2 million D) $20.7 million

196) Elaine was cooking dinner for some friends. She went out to do the shopping and spent $132. She spent twice as much on food as on drinks. How much did she spend on each? 196) _____

A) Drinks: $33; food: $66 B) Drinks: $44; food: $88
C) Drinks: $33; food: $99 D) Drinks: $66; food: $132

197) A 330–foot rope is cut into three pieces. The second piece is twice as long as the first. The third piece is 4 times as long as the second. How long is each piece of rope? 197) _____

A) First: 30 ft; second: 60 ft; third: 240 ft B) First: 47 ft; second: 94 ft; third: 377 ft
C) First: 41 ft; second: 83 ft; third: 330 ft D) First: 41 ft; second: 83 ft; third: 206 ft

198) A car rental business rents a compact car at a daily rate of $40.20 plus 20¢ per mile. Mike can afford to spend $63 on the car rental for one day. How many miles can he drive and stay within his budget? (Hint: 20¢ = $0.20) 198) _____

A) 114 mi B) 109 mi C) 119 mi D) 104 mi

199) You are traveling to your aunt's house that is 192 miles away. If you are currently twice as far from home as you are from your aunt's, how far have you traveled? 199) _____

A) 32.0 mi B) 96.0 mi C) 64 mi D) 128 mi

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200) Jordan sold his used computer and accessories for $348. If he received five times as much money for the computer as he did for the accessories, how much did he receive for the computer? 200) _____

A) $1740 B) $290 C) $68 D) $58

201) In West Arlington, taxis charge $6.75 plus 75¢ per mile for an airport pickup. How far from the airport can Amy travel for $35.25? (Hint: 75¢ = $0.75) 201) _____

A) 47 mi B) 26.4375 mi C) 94 mi D) 38 mi

202) Bill needs an average of 80 on four tests in science to make the honor roll. What is the lowest score he can receive on the fourth test if his first three scores are 60, 98, and 84? 202) _____

A) 78 B) 80.7 C) 80 D) 80.5

Determine whether the given number is a solution of the inequality.

203) $x > -10, -0.15$ 203) _____

A) Yes B) No

204) $x > 8,\ 5$ 204) _____

A) No B) Yes

205) $x < 13, -2.07$ 205) _____

A) Yes B) No

206) $x > -7, -13.5$ 206) _____

A) Yes B) No

207) $x \geq 3, 3.2$ 207) _____

A) Yes B) No

208) $x \geq 14, -4.8$ 208) _____

A) Yes B) No

209) $x \leq -4, -5.3$ 209) _____

A) Yes B) No

210) $x \leq 3, 6.11$ 210) _____

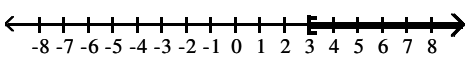
A) Yes B) No

Graph the inequality.

211) $x > 3$ 211) _____



A)



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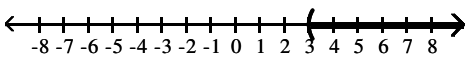

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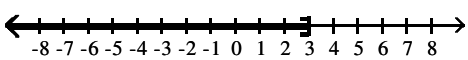
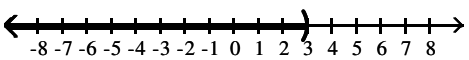


D)



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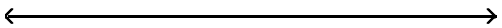
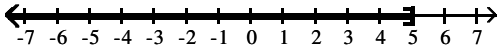
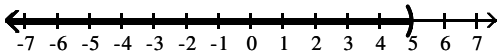
212) $x < 5$ 212) _____



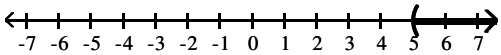
A)



B)



C)



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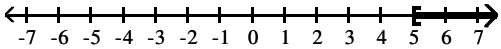
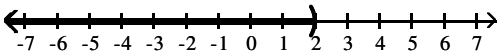


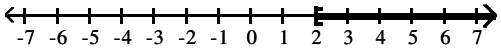
213) $x \geq 2$ 213) _____



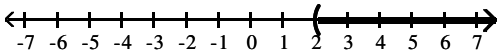
A)



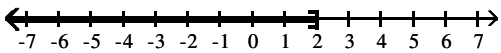
B)



C)



D)



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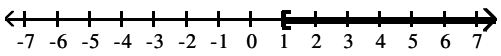
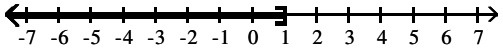
214) $x \leq 1$ 214) _____



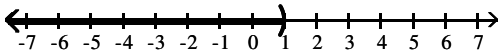
A)



B)



C)



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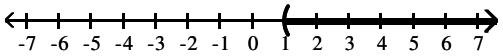
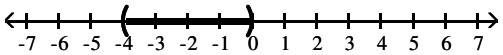


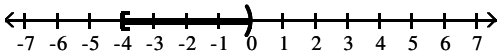
215) $-4 \leq x \leq 0$ 215) _____



A)



B)



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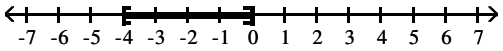

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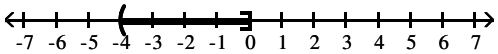

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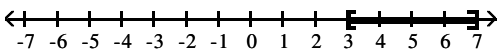
216) $3 < x < 7$ 216) _____



A)



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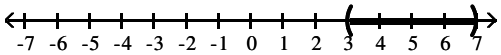
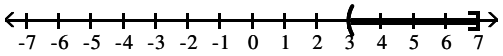
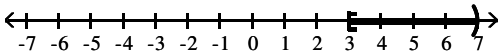


C)



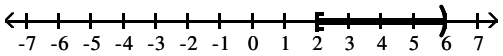
D)



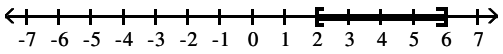
217) $2 \leq x < 6$ 217) _____



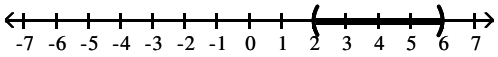
A)



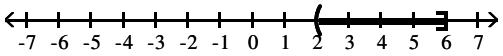
B)



C)



D)



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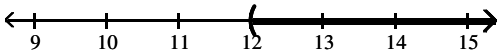
Solve using the addition principle. Graph and write set–builder notation for the answer.

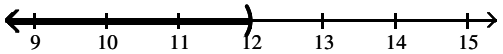
218) $a + 5 < 17$ 218) _____



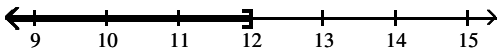
A) $\{a \mid a > 12\}$



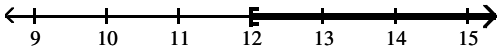
B) $\{a \mid a < 12\}$



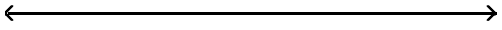
C) $\{a \mid a \leq 12\}$



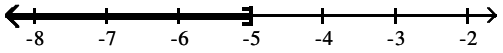
D) $\{a \mid a \geq 12\}$



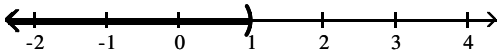
219) $-3n - 3 > -4n - 2$ 219) _____



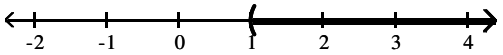
A) $\{n \mid n \leq -5\}$



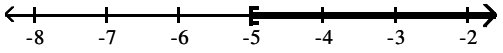
B) $\{n \mid n < 1\}$



C) $\{n \mid n > 1\}$



D) $\{n \mid n \geq -5\}$



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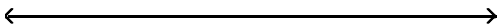
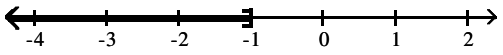
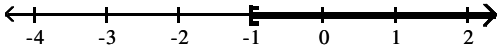
220) $-6t + 7 \geq -7t + 6$ 220) _____



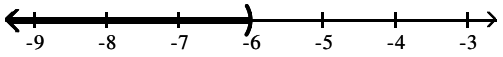
A) $\{t \mid t \leq -1\}$



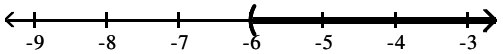
B) $\{t \mid t \geq -1\}$



C) $\{t \mid t < -6\}$



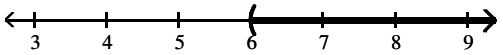
D) $\{t \mid t > -6\}$



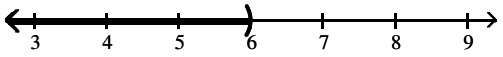
221) $f - 9 < -3$ 221) _____



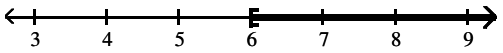
A) $\{f \mid f > 6\}$



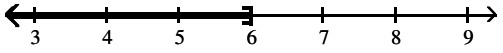
B) $\{f \mid f < 6\}$



C) $\{f \mid f \geq 6\}$



D) $\{f \mid f \leq 6\}$



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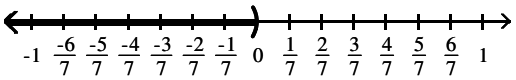
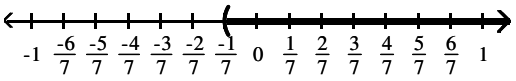
222) $x - \frac{1}{21} > -\frac{4}{21}$ 222) _____



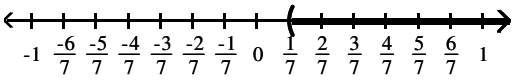
A) $\{x \mid x < 0\}$



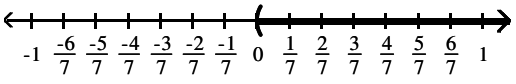
B) $\left\{x \mid x > -\frac{1}{7}\right\}$



C) $\left\{x \mid x > \frac{1}{7}\right\}$



D) $\left\{x \mid x > -\frac{1}{7}\right\}$



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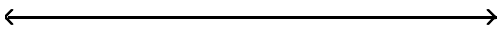
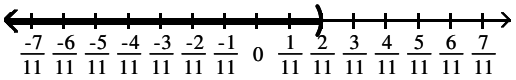
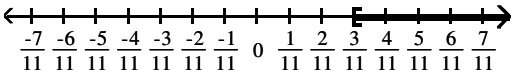
223) $x + \frac{1}{11} \geq \frac{4}{11}$ 223) _____



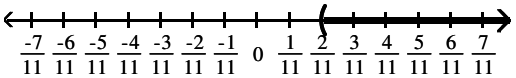
A) $\left\{x \mid x < \frac{2}{11}\right\}$



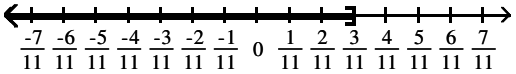
B) $\left\{x \mid x \geq \frac{3}{11}\right\}$



C) $\left\{x \mid x > \frac{2}{11}\right\}$



D) $\left\{x \mid x \leq \frac{3}{11}\right\}$



Solve using the multiplication principle.

224) $3a \geq 9$ 224) _____

A) $\{a \mid a < 3\}$ B) $\{a \mid a \leq 3\}$ C) $\{a \mid a > 3\}$ D) $\{a \mid a \geq 3\}$

225) $-3a < -15$ 225) _____

A) $\{a \mid a < -5\}$ B) $\{a \mid a > 5\}$ C) $\{a \mid a < 5\}$ D) $\{a \mid a > -5\}$

226) $5k \leq -25$ 226) _____

A) $\{k \mid k \leq -5\}$ B) $\{k \mid k \geq -5\}$ C) $\{k \mid k \leq 5\}$ D) $\{k \mid k \geq 5\}$

227) $-7a < \frac{1}{4}$ 227) _____

A) $\left\{a \mid a < -\frac{1}{28}\right\}$ B) $\left\{a \mid a < \frac{1}{28}\right\}$ C) $\left\{a \mid a > \frac{1}{28}\right\}$ D) $\left\{a \mid a > -\frac{1}{28}\right\}$

228) $-5x < -\frac{1}{4}$ 228) _____

A) $\left\{x \mid x > -\frac{1}{20}\right\}$ B) $\left\{x \mid x < \frac{1}{20}\right\}$ C) $\left\{x \mid x < -\frac{1}{20}\right\}$ D) $\left\{x \mid x > \frac{1}{20}\right\}$

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229) $-2x < \frac{1}{7}$ 229) _____

A) $\left\{x \mid x < \frac{1}{14}\right\}$ B) $\left\{x \mid x < \frac{3}{7}\right\}$ C) $\left\{x \mid x > \frac{3}{7}\right\}$ D) $\left\{x \mid x > -\frac{1}{14}\right\}$

230) $-\frac{4}{7} > -2x$ 230) _____

A) $\{x \mid x > 0\}$ B) $\{x \mid x < 0\}$ C) $\left\{x \mid x > \frac{2}{7}\right\}$ D) $\left\{x \mid x < -\frac{2}{7}\right\}$

Solve using the addition and multiplication principles.

231) $9 + 5x < 29$ 231) _____

A) $\left\{x \mid x < -\frac{38}{5}\right\}$ B) $\left\{x \mid x > -\frac{38}{5}\right\}$ C) $\{x \mid x > 4\}$ D) $\{x \mid x < 4\}$

232) $-7x + 6 > -8x + 2$ 232) _____

A) $\{x \mid x < 8\}$ B) $\{x \mid x < -4\}$ C) $\{x \mid x > -4\}$ D) $\{x \mid x > 8\}$

233) $-10z + 12 \le -11z + 16$ 233) _____

A) $\{z \mid z \ge 4\}$ B) $\{z \mid z \le 4\}$ C) $\{z \mid z < -10\}$ D) $\{z \mid z > -10\}$

234) $4z - 2 \ge 3z + 7$ 234) _____

A) $\{z \mid z > 4\}$ B) $\{z \mid z \le 9\}$ C) $\{z \mid z \ge 9\}$ D) $\{z \mid z < 4\}$

235) $2y - 1 \ge 3y - 12$ 235) _____

A) $\{y \mid y > 2\}$ B) $\{y \mid y \le 2\}$ C) $\{y \mid y \ge -11\}$ D) $\{y \mid y \le 11\}$

236) $-1 + 9x - 12 \ge 8x - 18$ 236) _____

A) $\{x \mid x \ge -5\}$ B) $\{x \mid x \le -5\}$ C) $\{x \mid x > 9\}$ D) $\{x \mid x < 9\}$

237) $0.6x + 19 + x > 2x + 16 - 0.5x$ 237) _____

A) $\{x \mid x \ge 3\}$ B) $\{x \mid x > -30\}$ C) $\{x \mid x < 3\}$ D) $\{x \mid x < -30\}$

238) $\frac{x}{2} + 4 \le 7$ 238) _____

A) $\{x \mid x \le -1\}$ B) $\{x \mid x < 8\}$ C) $\{x \mid x \ge 6\}$ D) $\{x \mid x \le 6\}$

239) $9x + 27 > 3(2x + 8)$ 239) _____

A) $\{x \mid x > -1\}$ B) $\{x \mid x \le -1\}$ C) $\{x \mid x < -1\}$ D) $\{x \mid x \ge -1\}$

240) $1 - \frac{5}{2}x + 3 > \frac{x}{2} + \frac{3}{2}$ 240) _____

A) $\left\{x \mid x < \frac{11}{6}\right\}$ B) $\left\{x \mid x > \frac{5}{4}\right\}$ C) $\left\{x \mid x > -\frac{7}{6}\right\}$ D) $\left\{x \mid x < \frac{5}{6}\right\}$

Translate the sentence to an inequality.

241) A number is greater than 7. 241) _____

A) $x > 7$ B) $x < 7$ C) $x \le 7$ D) $x \ge 7$

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242) A number is less than or equal to 3. 242) _____

A) $x > 3$ B) $x \geq 3$ C) $x < 3$ D) $x \leq 3$

243) John weighs at least 72 pounds. 243) _____

A) $x \leq 72$ B) $x > 72$ C) $x < 72$ D) $x \geq 72$

244) The score on a test was between 76 and 64. 244) _____

A) $64 < x < 76$ B) $x > 64$ C) $76 < x < 64$ D) $x < 76$

245) The cost is no more than $554.11. 245) _____

A) $x > 554.11$ B) $x \geq 554.11$ C) $x \leq 554.11$ D) $x < 554.11$

246) The number of people at a concert is not to exceed 3583. 246) _____

A) $x \geq 3583$ B) $x < 3583$ C) $x > 3583$ D) $x \leq 3583$

247) The height of a member of the basketball team is at least 80 inches. 247) _____

A) $x > 80$ B) $x \geq 80$ C) $x \leq 80$ D) $x < 80$

248) Four times a number less twenty–seven must be more than sixty. 248) _____

A) $4x - 27 > 60$ B) $4(x - 27) \geq 60$ C) $4(x - 27) > 60$ D) $4x - 27 \geq 60$

249) Three added to half of a number is at most six. 249) _____

A) $\frac{1}{2}x + 3 < 6$ B) $\frac{1}{2}x + 3 \geq 6$ C) $\frac{1}{2}x + 3 \leq 6$ D) $\frac{1}{2}x + 3 > 6$

Solve the problem.

250) A salesperson has two job offers. Company A offers a weekly salary of $450 plus commission of 18% of sales. Company B offers a weekly salary of $900 plus commission of 9% of sales. What is the amount of sales above which Company A's offer is the better of the two? 250) _____

A) $2500 B) $10,000 C) $5100 D) $5000

251) Company A rents copiers for a monthly charge of $240 plus 12 cents per copy. Company B rents copiers for a monthly charge of $480 plus 6 cents per copy. What is the number of copies above which Company A's charges are the higher of the two? 251) _____

A) 2000 copies B) 4100 copies C) 4000 copies D) 8000 copies

252) A car rental company has two rental rates. Rate 1 is $30 per day plus $.10 per mile. Rate 2 is $60 per day plus $.05 per mile. If you plan to rent for one week, how many miles would you need to drive to pay less by taking Rate 2? 252) _____

A) more than 30,100 miles B) more than 58,800 miles

C) more than 14,700 miles D) more than 4200 miles

253) Jim has gotten scores of 87 and 61 on his first two tests. What score must he get on his third test to keep an average of 80 or greater? 253) _____

A) At least 76.0 B) At least 74 C) At least 91 D) At least 92

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254) A bag of marbles has twice as many blue marbles as green marbles, and the bag has at least 60 marbles in it. At least how many green marbles does it have? 254) _____

A) At least 40 green marbles B) At least 30 green marbles
C) At least 21 green marbles D) At least 20 green marbles

255) Jon has 776 points in his math class. He must have 73% of the 1300 points possible by the end of the term to receive credit for the class. What is the minimum number of additional points he must earn by the end of the term to receive credit for the class? 255) _____

A) 173 points B) 949 points C) 566 points D) 524 points

256) DG's Plumbing and Heating charges $50 plus $75 per hour for emergency service. Bill remembers being billed just over $500 for an emergency call. How long to the nearest hour was the plumber at Bill's house? 256) _____

A) 17 hours B) 6 hours C) 7 hours D) 13 hours

257) A 7–pound puppy is gaining weight at a rate of $\frac{2}{3}$ lb per week. How much more time will it take for the puppy's weight to exceed $31\frac{2}{3}$ lb? 257) _____

A) more than 58 weeks B) more than 37 weeks

C) more than 38 weeks D) more than $22\frac{3}{4}$ week(s)

258) In order for a chemical reaction to take place, the Fahrenheit temperature of the reagents must be at least 140.66°F. Find the Celsius temperatures at which the reaction may occur. ($F = \frac{9}{5}C + 32$) 258) _____

A) $C \le 60.37°$ B) $C < 285.19°$ C) $C \ge 60.37°$ D) $C \ge 285.19°$

259) In order for a chemical reaction to remain stable, its Celsius temperature must be no more than 132.96°C. Find the Farenheit temperatures at which the reaction will remain stable. ($F = \frac{9}{5}C + 32$) 259) _____

A) $F \le 56.09°$ B) $F \ge 271.33°$ C) $F \le 271.33°$ D) $F \ge 56.09°$

260) The equation $y = 0.004x + 0.40$ can be used to determine the approximate profit, y in dollars, of producing x items. How many items must be produced so the profit will be at least $3498? 260) _____

A) $x \le 874{,}400$ B) $0 < x \le 874{,}399$ C) $x \ge 874{,}400$ D) $x \ge 874{,}600$

261) If the formula $R = -0.037t + 50.1$ can be used to predict the world record in the 400–meter dash t years after 1925, for what years will the world records be 47.1 seconds or less? 261) _____

A) 2008 or after B) 1982 or after C) 2006 or after D) 2007 or after

262) If the formula $P = 0.5643Y - 1092.57$ can be used to predict the average price of a theater ticket after 1945, for what years will the average theater ticket price be at least 46 dollars? (Y is the actual year.) 262) _____

A) 2028 or after B) 2016 or after C) 2020 or after D) 2018 or after

263) One side of a rectangle is 6 inches and the other side is x inches. What values of x will make the perimeter at least 34? 263) _____

A) $x \le 11$ B) $x < 11$ C) $0 < x \le 11$ D) $x \ge 11$

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264) One side of a rectangle is 6 inches and the other side is x inches. What values of x will make the perimeter at most 42? 264) _____

A) $x \geq 15$ B) $x < 15$ C) $0 < x \leq 15$ D) $x \leq 15$

265) One side of a rectangle is 3 times the other, and the perimeter is not to exceed 120. Find the possible values for x, the length of the shorter side. 265) _____

A) $x \leq 15$ B) $x \geq 45$ C) $0 < x \leq 15$ D) $0 < x \leq 45$

266) One side of a triangle is 5 cm shorter than the base, x. The other side is 3 cm longer than the base. What lengths of the base will allow the perimeter of the triangle to be at least 46 cm? 266) _____

A) $0 < x \leq 16$ B) $x \geq 16$ C) $x > 11$ D) $x \leq 19$

267) One side of a rectangle is 11 inches and the other side is x inches. Find the value of x if the area must be at least 66 square inches. 267) _____

A) $x \geq 6$ B) $x = 6$ C) $x \leq 6$ D) $0 < x \leq 6$

268) The area of a triangle must be at most 70 square inches, the base is 10 inches, and the height is x inches. Find the possible values for x. 268) _____

A) $0 < x \leq 7$ B) $0 < x \leq 14$ C) $x < 14$ D) $0 < x \leq 28$

269) The color guard is making new triangular flags that must have a base of 18 inches to fit on their flagpoles. What is the maximum length of the triangular flags, if they want to use a maximum of 351 $in.^2$ of cloth? 269) _____

A) 78 in. B) 39 in. C) 41 in. D) 19.5 in.

270) A shop keeper is making a triangular sign for his store front, but he must keep the sign under 20 ft^2 to adhere to zoning laws. If the base of the sign is 20 ft, what is the maximum height of the triangular sign? 270) _____

A) 0.500 ft B) 2.0 ft C) 20 ft D) 1.00 ft

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

Provide an appropriate response.

271) True or false: The solution of the equation $7y - 6 = 7y + 3$ is zero. 271) _____

272) The solution for the equation $8(3s - 7) = 24s - 56$ is given as 0. Is this correct? Explain. 272) _____

273) Write the steps you would use to solve this equation: $2(x - 1) + 3x = -8x$. 273) _____

274) What value of K makes this equation equivalent to $x = 3$? 274) _____

$5x - 9 = K$

275) What value of K makes this equation equivalent to $x = 3$? 275) _____

$$\frac{9}{K + x} = 3$$

276) What value of K makes this equation equivalent to $x = 4$? 276) _____

$5x + 16x - 8 = K + 6$

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277) Find all values of s that make this statement true: $4(6s - 2) = 24s - 8$. 277) _____

278) Find all values of x that make this statement true: $(x - 8) + 8 = (x + 8) - 8$. 278) _____

279) Express three consecutive integers, all in terms of x, if x is the largest integer. 279) _____

280) One number is twice another. If the larger number is m, how do you express the other number in terms of m? 280) _____

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

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

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

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151) A
152) C
153) B
154) D
155) A
156) D
157) D
158) C
159) C
160) A
161) D
162) A
163) D
164) D
165) D
166) D
167) C
168) C
169) B
170) D
171) C
172) C
173) D
174) D
175) C
176) C
177) C
178) D
179) A
180) A
181) C
182) D
183) C
184) D
185) A
186) B
187) B
188) C
189) B
190) B
191) B
192) D
193) D
194) B
195) C
196) B
197) A
198) A
199) D
200) B

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201) D
202) A
203) A
204) A
205) A
206) B
207) A
208) B
209) A
210) B
211) B
212) B
213) B
214) B
215) C
216) B
217) A
218) B
219) C
220) B
221) B
222) B
223) B
224) D
225) B
226) A
227) D
228) D
229) D
230) C
231) D
232) C
233) B
234) C
235) D
236) A
237) B
238) D
239) A
240) D
241) A
242) D
243) D
244) A
245) C
246) D
247) B
248) A
249) C
250) D

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251) C
252) D
253) D
254) D
255) A
256) B
257) B
258) C
259) C
260) C
261) D
262) D
263) D
264) C
265) C
266) B
267) A
268) B
269) B
270) B
271) False. It has no solution.
272) No. The solution is all real numbers. Explanations will vary.
273) Answers will vary.
274) 6
275) 0
276) 70
277) s can be any value, including 0.
278) x can be any value, including 0.
279) x – 2, x – 1, x
280) $\frac{m}{2}$ or $\frac{1}{2}$ m

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