Beginning Algebra 9th edition Tobey Test Bank

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

Solve for x. Check your answers.

1) $x - 24 = 1$

A) $x = -23$
B) $x = -25$
C) $x = 23$
D) $x = 25$

Answer: D

2) $15 = x - 3$

A) $x = -12$
B) $x = -18$
C) $x = 12$
D) $x = 18$

Answer: D

3) $x - 5 = 16$

A) $x = -11$
B) $x = -21$
C) $x = 21$
D) $x = 11$

Answer: C

4) $x - 2 = 17$

A) $x = 15$
B) $x = -15$
C) $x = -19$
D) $x = 19$

Answer: D

5) $14 = x - 17$

A) $x = -3$
B) $x = -31$
C) $x = 3$
D) $x = 31$

Answer: D

6) $x - 18 = 15$

A) $x = -270$
B) $x = 33$
C) $x = -33$
D) $x = -3$

Answer: B

7) $-9 = x + 17$

A) $x = 26$
B) $x = 8$
C) $x = -26$
D) $x = -153$

Answer: C

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8) $1 + 15 + x = 12 + 19$

A) $x = 45$
B) $x = -23$
C) $x = 15$
D) $x = 47$

Answer: C

9) $8 - 20 + 6 = 1 + x - 9$

A) $x = 2$
B) $x = 26$
C) $x = 4$
D) $x = -16$

Answer: A

10) $20 + 10 = x - 2$

A) $x = 28$
B) $x = 12$
C) $x = 32$
D) $x = 8$

Answer: C

Find the value of x that satisfies the equation.

11) $2.2 + x = 24$

A) $x = 21.8$
B) $x = 26.2$
C) $x = 25.7$
D) $x = 21.3$

Answer: A

12) $-2.3 = 21 - x$

A) $x = 23.3$
B) $x = 18.2$
C) $x = 22.8$
D) $x = 18.7$

Answer: A

13) $0.4 + x + 2.6 = 4.6$

A) $x = 6.8$
B) $x = 2.4$
C) $x = 1.6$
D) $x = 7.6$

Answer: C

14) $1.5 = 17.3 - x$

A) $x = 18.8$
B) $x = 18.3$
C) $x = 15.8$
D) $x = 15.3$

Answer: C

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15) $-0.6 + x = 20.8$

A) $x = 20.9$

B) $x = 19.7$

C) $x = 20.2$

D) $x = 21.4$

Answer: D

16) $\frac{1}{3} + x = 10$

A) $x = 3$

B) $x = \frac{31}{3}$

C) $x = 29$

D) $x = \frac{29}{3}$

Answer: D

17) $x + \frac{4}{5} = \frac{9}{10}$

A) $x = \frac{17}{10}$

B) $x = \frac{1}{10}$

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

D) $x = 1$

Answer: B

18) $x - \frac{2}{9} = \frac{1}{3}$

A) $x = 1$

B) $x = \frac{5}{9}$

C) $x = \frac{1}{9}$

D) $x = \frac{2}{9}$

Answer: B

19) $x + 1\frac{3}{5} = 2\frac{1}{5}$

A) $x = 3$

B) $x = 2$

C) $x = \frac{19}{5}$

D) $x = \frac{3}{5}$

Answer: D

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20) $x - \frac{8}{11} = -\frac{2}{11}$

A) $x = -\frac{10}{11}$

B) $x = -\frac{6}{11}$

C) $x = \frac{10}{11}$

D) $x = \frac{6}{11}$

Answer: D

21) $\frac{1}{2} - \frac{1}{2} = x - \frac{2}{3}$

A) $x = \frac{2}{3}$

B) $x = \frac{5}{3}$

C) $x = -\frac{2}{3}$

D) $x = \frac{5}{6}$

Answer: A

Determine if the given solution is correct. If it is not, find the solution.

22) Is –14 the solution to $-17 - 4 = x - 5$?

A) yes

B) no; $x = -16$

C) no; $x = -18$

D) no; $x = -26$

Answer: B

23) Is –9 the solution to $x + 10 = 8 - 7$?

A) no; $x = 25$

B) yes

C) no; $x = 11$

D) no; $x = 5$

Answer: B

24) Is 29 the solution to $-16 + x = 14$?

A) yes

B) no; $x = -2$

C) no; $x = -30$

D) no; $x = 30$

Answer: D

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Solve for x. Be sure to reduce your answer. Check your solution.

25) $-\frac{1}{9}x = -5$

A) $x = 45$
B) $x = -15$
C) $x = 0$
D) $x = -14$

Answer: A

26) $-\frac{1}{14}x = 0$

A) $x = 0$
B) $x = 1$
C) $x = 14$
D) $x = -14$

Answer: A

27) $\frac{x}{3} = 5$

A) $x = 1$
B) $x = 15$
C) $x = 8$
D) $x = 7$

Answer: B

28) $-\frac{5}{14}x = -\frac{25}{14}$

A) $x = 9$
B) $x = -3$
C) $x = 5$
D) $x = 8$

Answer: C

29) $7x = -35$

A) $x = 1$
B) $x = -5$
C) $x = -42$
D) $x = 42$

Answer: B

30) $-60.3 = -6.7x$

A) $x = 53.6$
B) $x = -53.6$
C) $x = 2$
D) $x = 9$

Answer: D

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31) $-9x = -27$

A) $x = 3$

B) $x = 18$

C) $x = -18$

D) $x = 2$

Answer: A

32) $-x = 2$

A) $x = 0$

B) $x = -1$

C) $x = -2$

D) $x = 2$

Answer: C

Find the value of the variable that satisfies the equation.

33) $7x + x = 32$

A) $x = \frac{33}{7}$

B) $x = 3$

C) $x = 4$

D) $x = \frac{32}{7}$

Answer: C

34) $-6x + x = -30$

A) $x = 6$

B) $x = -7$

C) $x = 7$

D) $x = -6$

Answer: A

35) $-10x - 17x = -13$

A) $x = 14$

B) $x = \frac{27}{13}$

C) $x = \frac{13}{27}$

D) $x = 351$

Answer: C

36) $6x + 11x = 10$

A) $x = \frac{10}{17}$

B) $x = -7$

C) $x = 170$

D) $x = \frac{17}{10}$

Answer: A

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Determine if the given solution is correct. If it is not, find the solution.

37) Is -16 the solution to $-x = 16$

A) no; $x = 16$
B) no; $x = -1$
C) no; $x = 0$
D) yes

Answer: D

38) Is $\frac{57}{2}$ the solution to $2x = 55$

A) no; $x = \frac{2}{55}$

B) no; $x = \frac{55}{2}$

C) no; $x = 110$
D) yes

Answer: B

Find the value of the variable that satisfies the equation.

39) $\frac{x}{8} + 6 = 9$

A) $x = 11$
B) $x = 122$
C) $x = 120$
D) $x = 24$

Answer: D

40) $7x + 6 = 69$

A) $x = 56$
B) $x = 60$
C) $x = 3$
D) $x = 9$

Answer: D

41) $3x - 4 = 20$

A) $x = 21$
B) $x = 8$
C) $x = 10$
D) $x = 25$

Answer: B

42) $3 = 5x - 7$

A) $x = 2$
B) $x = 7$
C) $x = 9$
D) $x = 5$

Answer: A

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43) $\frac{1}{4}x - \frac{1}{4} = -6$

A) $x = 25$
B) $x = -23$
C) $x = -25$
D) $x = 23$

Answer: B

44) $\frac{1}{6}x - 4 = 1$

A) $x = 18$
B) $x = 30$
C) $x = -30$
D) $x = -18$

Answer: B

45) $-6x + 8 = -2 - 10x$

A) $x = -\frac{5}{2}$

B) $x = -\frac{2}{5}$

C) $x = -\frac{8}{3}$

D) $x = \frac{2}{5}$

Answer: A

46) $3x + 5 = -1 - 9x$

A) $x = -\frac{3}{2}$

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

Answer: D

47) $-6x + 5 + 4x = -3x + 10$

A) $x = 5$
B) $x = 10$
C) $x = -10$
D) $x = -5$

Answer: A

48) $63 - 7x = 2x$

A) $x = -6$
B) $x = 6$
C) $x = 7$
D) $x = -7$

Answer: C

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49) $-2x = -10x - 40$

A) $x = -\frac{1}{5}$

B) $x = \frac{10}{3}$

C) $x = -5$

D) $x = 20$

Answer: C

Solve for the variable.

50) $-1(x + 20) = -19$

A) $x = 39$

B) $x = -1$

C) $x = -39$

D) $x = 1$

Answer: B

51) $3(x + 8) = 4(x - 5)$

A) $x = -44$

B) $x = -4$

C) $x = 4$

D) $x = 44$

Answer: D

52) $3(2x - 3) = 5(x + 2)$

A) $x = 4$

B) $x = -1$

C) $x = 19$

D) $x = 1$

Answer: C

53) $-8(x - 4) - (-9x + 2) = -2$

A) $x = -32$

B) $x = -4$

C) $x = 28$

D) $x = 32$

Answer: A

Determine whether the given solution is correct. If it is not, find the solution.

54) Is $\frac{13}{2}$ the solution for $2x + 3 = -10 + 4x$?

A) No; $x = -\frac{2}{13}$

B) No; $x = -\frac{6}{7}$

C) Yes

D) No; $x = \frac{2}{13}$

Answer: C

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55) Is $\frac{15}{14}$ the solution for $-7x + 10 = -4 + 8x$?

A) No; $x = \frac{14}{15}$

B) No; $x = -\frac{15}{14}$

C) Yes

D) No; $x = \frac{1}{6}$

Answer: A

56) Is 5 the solution for $-8x + 7 + 6x = -3x + 12$?

A) No; $x = -7$

B) No; $x = 12$

C) No; $x = -12$

D) Yes

Answer: D

57) Is 12 the solution for $-6x + 7 + 4x = -3x + 12$?

A) No; $x = 5$

B) Yes

C) No; $x = -7$

D) No; $x = -12$

Answer: A

Solve.

58) $x - \frac{1}{2}x - 5 = 1$

A) $x = 8$

B) $x = -12$

C) $x = 12$

D) $x = -8$

Answer: C

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

A) $x = 30$

B) $x = -60$

C) $x = 60$

D) $x = -30$

Answer: A

60) $\frac{1}{4}x - \frac{3}{8}x = 4$

A) $x = -32$

B) $x = 28$

C) $x = -28$

D) $x = 32$

Answer: A

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61) $\frac{1}{5}(x + 6) = \frac{1}{6}(x + 8)$

A) $x = -4$
B) $x = 3$
C) $x = 4$
D) $x = -12$

Answer: C

62) $\frac{1}{3}x - \frac{1}{3} = -3$

A) $x = -8$
B) $x = -10$
C) $x = 8$
D) $x = 10$

Answer: A

63) $\frac{4x + 5}{3} + 2 = -\frac{7x}{5}$

A) $x = \frac{5}{41}$

B) $x = -\frac{5}{41}$

C) $x = 55$

D) $x = -\frac{55}{41}$

Answer: D

64) $-\frac{1}{8}(x - 16) + \frac{1}{5}(x + 5) = x - 8$

A) $x = \frac{280}{37}$

B) $x = \frac{440}{37}$

C) $x = \frac{200}{37}$

D) $x = \frac{360}{37}$

Answer: B

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65) $-\frac{1}{2}x-\left(x-\frac{1}{2}\right)=\frac{1}{48}(x+6)$

A) $x=\frac{18}{73}$

B) $x=\frac{18}{71}$

C) $x=-\frac{18}{23}$

D) $x=-\frac{30}{73}$

Answer: A

66) $\frac{4(7-x)}{3}=x$

A) $x=4$

B) $x=-4$

C) $x=7$

D) $x=\frac{28}{5}$

Answer: A

67) $\frac{3(y-2)}{5}=1-3y$

A) $y=\frac{11}{6}$

B) $y=\frac{7}{6}$

C) $y=\frac{11}{18}$

D) $y=-\frac{11}{18}$

Answer: C

68) $-0.02y+0.11(1000-y)=0.12y$

A) $y=27.5$

B) $y=440$

C) $y=275$

D) $y=1320$

Answer: B

69) $-0.3(20)+0.6x=0.3(20+x)$

A) $x=30$

B) $x=20$

C) $x=40$

D) $x=50$

Answer: C

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70) $0.6x - 0.5(50 + x) = -0.34(50)$

A) $x = 70$
B) $x = 40$
C) $x = 80$
D) $x = 90$

Answer: C

71) $1.4x + 4.6 = 0.7x - 1.35$

A) $x = -8.5$
B) $x = -7.65$
C) $x = -8.4$
D) $x = 0.118$

Answer: A

72) $1.5x + 4.7 = 0.8x + 0.01$

A) $x = -6.7$
B) $x = -0.149$
C) $x = -6.767$
D) $x = -6.71$

Answer: A

Answer Yes or No.

73) Is 24 a solution to $x - 5 = \frac{3}{4}x + 1$?

A) Yes
B) No

Answer: A

74) Is -12 a solution to $x - 3 = \frac{2}{3}x + 1$?

A) Yes
B) No

Answer: B

75) Is -1 a solution to $\frac{1}{5}(x + 6) = \frac{1}{7}x + \frac{8}{7}$?

A) Yes
B) No

Answer: A

76) Is -4 a solution to $\frac{1}{5}(x + 6) = \frac{1}{6}x + \frac{4}{3}$?

A) Yes
B) No

Answer: B

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Solve.

77) $3(x + 5) = 3x + 15$

A) $x = 30$
B) No solution
C) Infinite number of solutions
D) $x = 0$

Answer: C

78) $4(x + 5) + 4 = 4x + 2$

A) Infinite number of solutions
B) $x = 22$
C) No solution
D) $x = 11$

Answer: C

79) $-7x + 6 + 5x = -2x + 11$

A) No solution
B) Infinite number of solutions
C) $x = 5$
D) $x = -6$

Answer: A

80) $4x + 7 - 7x - 1 = 6x - 9x + 3$

A) $x = -224$
B) $x = 0$
C) No solution
D) Infinite number of solutions

Answer: C

81) $7(x + 1) = 16x + 16 - 9x - 9$

A) $x = 1$
B) No solution
C) $x = 0$
D) Infinite number of solutions

Answer: D

82) $5(x + 2) + 34 = 7x - 2(x - 8)$

A) $x = 18$
B) No solution
C) Infinite number of solutions
D) $x = 50$

Answer: B

83) $24(x + 1) = 2(12x - 5) + 34$

A) $x = 24$
B) Infinite number of solutions
C) No solution
D) $x = 0$

Answer: B

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84) $22x + 4(x + 1) = 26(x + 1) - 22$

A) No solution

B) Infinite number of solutions

C) $x = 0$

D) $x = 1$

Answer: B

85) The formula for the perimeter of a rectangle is $P = 2L + 2W$. If the length, L, is 2 meters and the width, W, is 7 meters find the perimeter, P, of this rectangle.

A) $P = 9$ m

B) $P = 18$ m

C) $P = 11$ m

D) $P = 28$ m

Answer: B

86) The formula for the area of a triangle is $A = \frac{1}{2}bh$. If the base, b, is 14 in. and the height, h, is 4 in. find the area of this triangle.

A) $A = 18\frac{1}{2}$ in.^{2}

B) $A = 18$ in.^{2}

C) $A = 28$ in.^{2}

D) $A = 56$ in.^{2}

Answer: C

87) The formula for distance is $d = rt$. If the rate of speed, r, is 7 miles per hour and the time traveled, t, is 7 hours, find the distance.

A) $d = 42$ mi

B) $d = 0.1$ mi

C) $d = 56$ mi

D) $d = 49$ mi

Answer: D

88) The formula for the perimeter of a rectangle is $P = 2L + 2W$. If the perimeter, P, is 18 feet and the width, W, is 6 feet find the length, L, of this rectangle.

A) $L = 6$ ft

B) $L = 12$ ft

C) $L = 3$ ft

D) $L = 9$ ft

Answer: C

89) The formula for the volume of a cone is $V = \frac{1}{3}Bh$. If the Volume, V, is 35 cubic centimeters and the height, h, is 5 centimeters, find the base, B, of this cone.

A) $B = 175$ cm^2

B) $B = 7$ cm^2

C) $B = 40$ cm^2

D) $B = 21$ cm^2

Answer: D

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90) The formula for calculating simple interest is I = prt. If the amount of interest, I, is $45.00, the principal (amount of money invested), p, is $250.00, and the rate of interest, r, is 2%, find the amount of time, t.

A) t = 9 yr
B) t = 2.25 yr
C) t = 225 yr
D) t = 0.9 yr

Answer: A

91) The formula for the area of a trapezoid is $A = \frac{1}{2}(b + B)h$. If the area, A, is 115.5 square meters, and the bases, b and B, are 15 meters and 18 meters , find the height, h, of this trapezoid.

A) $h = 16\frac{1}{2}$ m
B) h = 270 m
C) h = 99 m
D) h = 7 m

Answer: D

Solve for the indicated variable.

92) $A = \frac{1}{2}bh$ for b

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

Answer: A

93) $S = 2\pi rh + 2\pi r^2$ for h

A) h = S – r
B) $h = \frac{S - 2\pi r^2}{2\pi r}$
C) $h = \frac{S}{2\pi r} - 1$
D) $h = 2\pi(S - r)$

Answer: B

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

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

B) $h = \frac{B}{3V}$

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

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

Answer: A

95) $P = S_1 + S_2 + S_3$ for S_3

A) $S_3 = S_1 + P - S_2$

B) $S_3 = P + S_1 + S_2$

C) $S_3 = P - S_1 - S_2$

D) $S_3 = S_1 + S_2 - P$

Answer: C

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

A) $C = \frac{5}{F - 32}$

B) $C = \frac{F - 32}{9}$

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

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

Answer: C

97) $d = rt$ for r

A) $r = \frac{t}{d}$

B) $r = dt$

C) $r = \frac{d}{t}$

D) $r = d - t$

Answer: C

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98) $P = 2L + 2W$ for L

A) $L = \frac{P - 2W}{2}$

B) $L = \frac{P - W}{2}$

C) $L = d - 2W$

D) $L = P - W$

Answer: A

Solve the problem using a known formula.

99) The width of a room is 6 feet, and the area of the room is 66 square feet. Find the room's length.

A) 396 ft

B) 60 ft

C) 27 ft

D) 11 ft

Answer: D

100) Michael is shipping his mother's birthday gift to her in a rectangular box. If the gift's dimensions are 2 inches long by 5 inches wide by 9 inches high, find the volume of the smallest box that will hold the gift.

A) 14 $in.^3$

B) 180 $in.^3$

C) 90 $in.^3$

D) 16 $in.^3$

Answer: C

101) During a chemistry experiment, Ken recorded the temperature of a liquid to be 13° C. Convert this temperature to Fahrenheit.

A) $39\frac{2}{9}°$ F

B) $55\frac{2}{5}°$ F

C) $-10\frac{5}{9}°$ F

D) $23\frac{2}{5}°$ F

Answer: B

102) You are varnishing the background for a right–triangularly shaped mural. The base of the mural is 3 meters and the height of the mural is 13 meters. How many cans of varnish will you need if each can covers 10 square meters?

A) 20 cans of varnish

B) 4 cans of varnish

C) 8 cans of varnish

D) 2 cans of varnish

Answer: D

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103) Jim runs one time around a circular track that has a radius of 3 kilometers, and Chris runs two times around a circular track with a radius of 2 kilometers. Who ran the farther distance? (Use 3.14 as an approximation for π.)
A) Jim and Chris both ran the same distance.
B) Chris ran a farther distance.
C) Jim ran a farther distance.

Answer: B

104) Farmer Joe just replaced the fencing for his pig pen. He used exactly 34 feet of fencing for the rectangular shaped pen. If the length of the pen is 12 feet, what is the width of the pen?
A) 10 ft
B) 5 ft
C) 29 ft
D) $2\frac{5}{6}$ ft

Answer: B

105) You have a cylindrical cooking pot whose radius is 6 inches and whose height is 7 inches. How many full cans of soup will fit into the pot if each can has holds 20 cubic inches of soup? (Use 3.14 as an approximation for π.)
A) 39 cans of soup
B) 13 cans of soup
C) 12 cans of soup
D) 40 cans of soup

Answer: A

106) A contestant in a 20–mile race finished in 5 hours. What was her average rate during the race? (Round to the nearest tenth, if necessary.)
A) 0.3 mph
B) 15 mph
C) 100 mph
D) 4.0 mph

Answer: D

107) How long would it take to drive 350 kilometers if your average rate of speed was 50 kilometers per hour?
A) 8 hr
B) 175 hr
C) 7 hr
D) 40 hr

Answer: C

Replace the ? by < or >.

108) 2 ? –7
A) >
B) <

Answer: A

109) –9 ? –3
A) >
B) <

Answer: B

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110) –0.6 ? 1.0

A) >

B) <

Answer: B

111) –2 ? $-\frac{19}{2}$

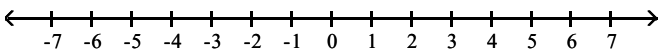
A) <

B) >

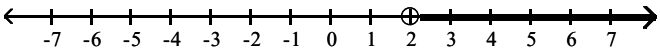
Answer: B

Graph the inequality on the number line.

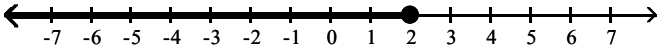
112) x > 2



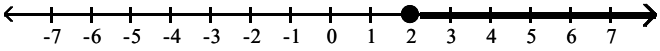
A)



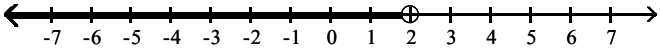
B)



C)

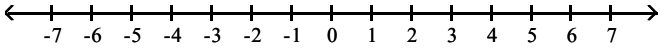


D)

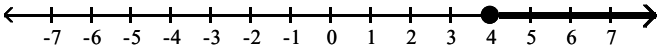


Answer: A

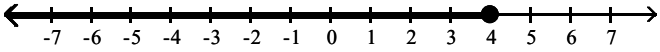
113) x < 4



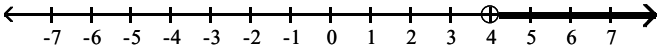
A)



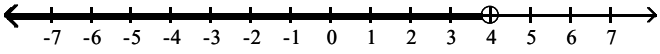
B)



C)



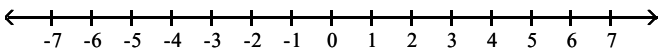
D)



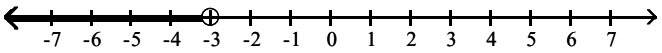
Answer: D

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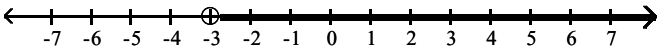
114) $x \geq -3$



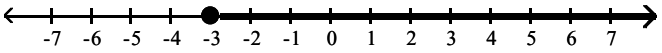
A)



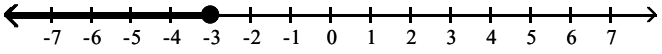
B)



C)

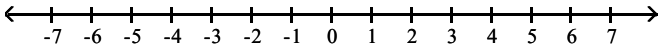


D)

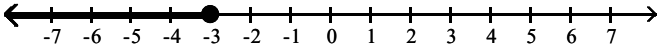


Answer: C

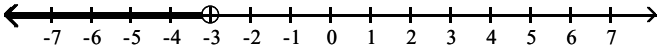
115) $x \leq -3$



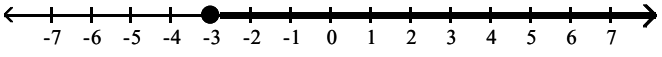
A)



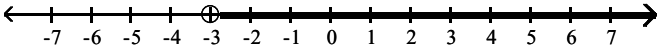
B)



C)



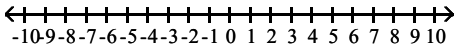
D)



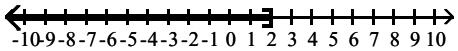
Answer: A

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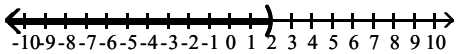
116) $x < 2$



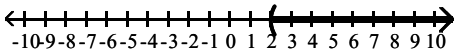
A)



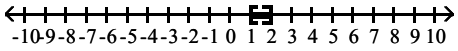
B)



C)



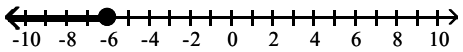
D)



Answer: B

Translate each graph to an inequality using the variable x.

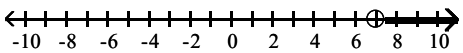
117)



A) $x > -6$
B) $x < -6$
C) $x \geq -6$
D) $x \leq -6$

Answer: D

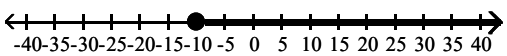
118)



A) $x < 7$
B) $x \geq 7$
C) $x > 7$
D) $x \leq 7$

Answer: C

119)

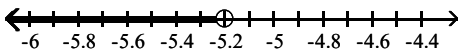


A) $x \geq -10$
B) $x > -10$
C) $x < -10$
D) $x \leq -10$

Answer: A

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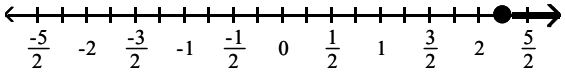
120)



A) $x > -5.2$
B) $x \geq -5.2$
C) $x < -5.2$
D) $x \leq -5.2$

Answer: C

121)



A) $x > \frac{9}{4}$

B) $x < \frac{9}{4}$

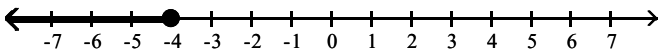
C) $x \leq \frac{9}{4}$

D) $x \geq \frac{9}{4}$

Answer: D

Translate the graph to an inequality using the variable x.

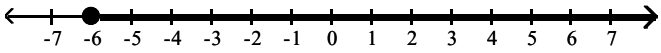
122)



A) $x < -4$
B) $x \leq -4$
C) $x \geq -4$
D) $x > -4$

Answer: B

123)

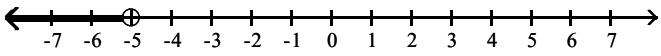


A) $x > -6$
B) $x < -6$
C) $x \leq -6$
D) $x \geq -6$

Answer: D

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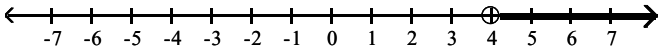
124)



A) $x \leq -5$
B) $x > -5$
C) $x \geq -5$
D) $x < -5$

Answer: D

125)



A) $x > 4$
B) $x < 4$
C) $x \geq 4$
D) $x \leq 4$

Answer: A

Translate the English statement into an inequality.

126) The cost of shoes must be less than $59. (Use the variable c for the cost.)

A) $c \leq 59$
B) $c > 59$
C) $c \geq 59$
D) $c < 59$

Answer: D

127) The speed of the bike is more than 15 mph. (Use the variable s for the speed.)

A) $s \geq 15$
B) $s < 15$
C) $s \leq 15$
D) $s > 15$

Answer: D

128) The number of people the school can hold is at most 172. (Use the variable p for number of people.)

A) $p \geq 172$
B) $p > 172$
C) $p \leq 172$
D) $p < 172$

Answer: C

129) The rocket must reach a speed of at least 920 mph. (Use the variable V for speed.)

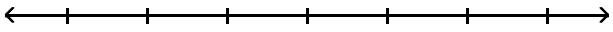
A) $V \leq 920$
B) $V > 920$
C) $V \geq 920$
D) $V < 920$

Answer: C

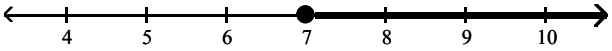
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Solve the inequality. Graph the results.

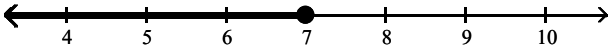
130) $x - 1 < 6$



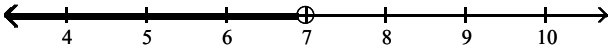
A) $x \geq 7$



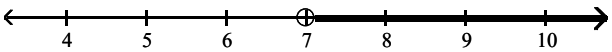
B) $x \leq 7$



C) $x < 7$

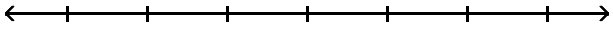


D) $x > 7$

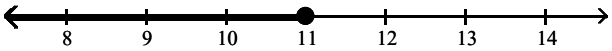


Answer: C

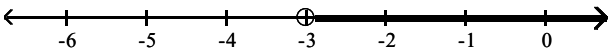
131) $12x + 7 > 11x + 4$



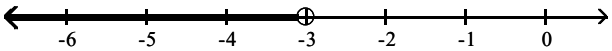
A) $x \leq 11$



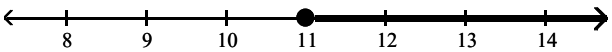
B) $x > -3$



C) $x < -3$



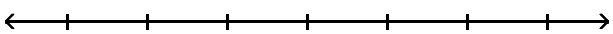
D) $x \geq 11$



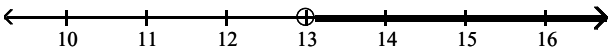
Answer: B

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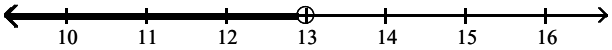
132) $13x - 2 \le 12x + 2$



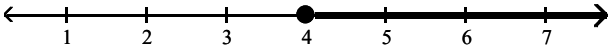
A) $x > 13$



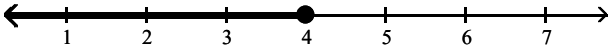
B) $x < 13$



C) $x \ge 4$

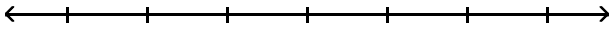


D) $x \le 4$

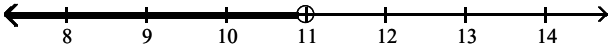


Answer: D

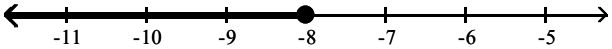
133) $11x + 6 \ge 10x - 2$



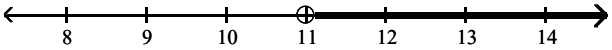
A) $x < 11$



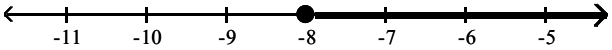
B) $x \le -8$



C) $x > 11$



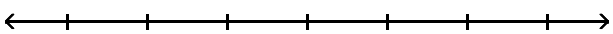
D) $x \ge -8$



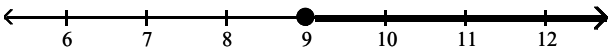
Answer: D

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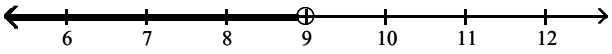
134) $x - 5 < 4$



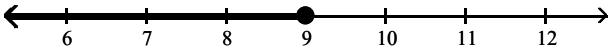
A) $x \geq 9$



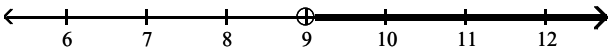
B) $x < 9$



C) $x \leq 9$

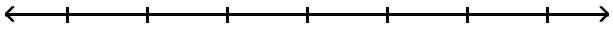


D) $x > 9$

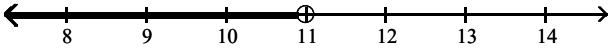


Answer: B

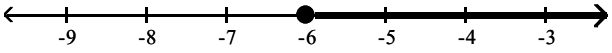
135) $-1 + 11x - 12 \geq 10x - 19$



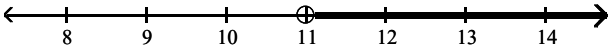
A) $x < 11$



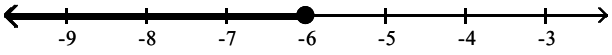
B) $x \geq -6$



C) $x > 11$



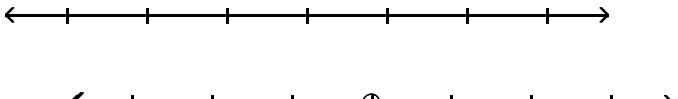
D) $x \leq -6$

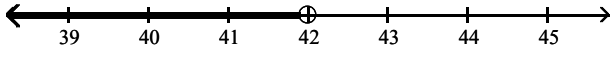


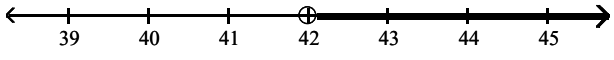
Answer: B

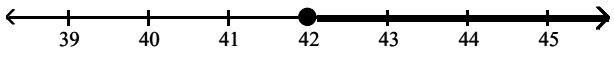
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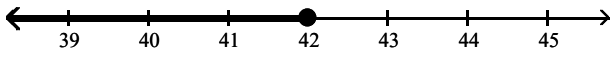
136) $\frac{x}{7} \geq 6$



A) 

B) 

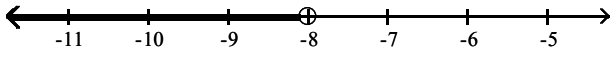
C) 

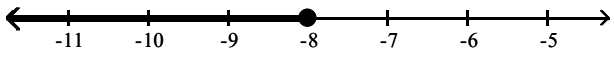
D) 

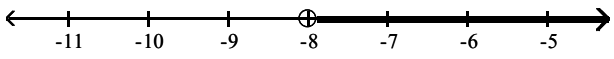
Answer: C

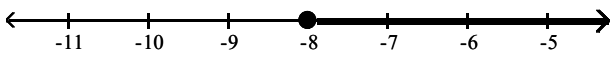
137) $-4 < \frac{x}{2}$



A) 

B) 

C) 

D) 

Answer: C

Solve the inequality.

138) $-2x - 7 > -3x - 9$

A) $x \leq -16$
B) $x > -2$
C) $x \geq -16$
D) $x < -2$

Answer: B

139) $30x - 35 > 5(5x - 3)$

A) $x < 4$
B) $x > 4$
C) $x \geq 4$
D) $x \leq 4$

Answer: B

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140) $-4(3x - 13) < -16x + 36$

A) $x < -4$
B) $x > -4$
C) $x \geq -4$
D) $x \leq -4$

Answer: A

141) $-14x + 2 \leq -2(6x - 10)$

A) $x < -9$
B) $x > -9$
C) $x \geq -9$
D) $x \leq -9$

Answer: C

142) $20x + 28 \leq 4(4x + 10)$

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

Answer: B

143) $-9x + 10 - 9x < 8 - 20x + 6$

A) $x < 2$
B) $x \leq 12$
C) $x \geq 12$
D) $x > 2$

Answer: A

144) $\frac{3}{5}(x + 3) > \frac{2}{5}(x + 1)$

A) $x > 7$
B) $x > -7$
C) $x < -7$
D) $x < 7$

Answer: B

145) $\frac{x + 4}{6} - \frac{1}{16} > \frac{x + 7}{8}$

A) $x < \frac{13}{2}$

B) $x < \frac{1}{2}$

C) $x > \frac{77}{2}$

D) $x > \frac{13}{2}$

Answer: D

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146) $0.9(1.7 - x) + 0.7 > 3.4(x - 0.3)$ (Round to two decimal places if necessary)

A) $x > 1.30$
B) $x < 0.76$
C) $x < 1.30$
D) $x > 0.76$

Answer: B

Solve the problem.

147) John has received scores of 85, 88, 87, and 80 on her algebra tests. What is the minimum score he must receive on the fifth test to have an overall test score average of at least 82? (Hint: The average of a list of numbers is their sum divided by the number of numbers in the list.)

A) 68
B) 71
C) 70
D) 69

Answer: C

Solve for the variable.

148) $3x + 3.3 = 30.3$

A) $x = 28$
B) $x = 7$
C) $x = 24$
D) $x = 9$

Answer: D

149) $-9x + 1 = -7 + 7x$

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

Answer: C

150) $5(y + 4) = 6(y - 3)$

A) $y = 2$
B) $y = -2$
C) $y = 38$
D) $y = -38$

Answer: C

151) $\frac{2}{5}y - 2 = \frac{1}{3}y$

A) $y = 60$
B) $y = 30$
C) $y = -60$
D) $y = -30$

Answer: B

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152) $2(x + 5) = 3(x - 3)$

A) $x = -1$

B) $x = -19$

C) $x = 19$

D) $x = 1$

Answer: C

153) $-8.2 + 2x - 6.6 + 4x - 2.9 = 5.1 + 7x + 1.3$

A) $x = 11.3$

B) $x = -11.3$

C) $x = 24.1$

D) $x = -24.1$

Answer: D

154) $\frac{3}{4}y + \frac{1}{2} = -\frac{1}{4}y - \frac{3}{10}$

A) $y = \frac{1}{5}$

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

C) $y = -\frac{3}{8}$

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

Answer: B

155) $-2y - 7 - 3(y + 1) = 6y - 7$

A) $y = -\frac{3}{11}$

B) $y = \frac{1}{8}$

C) $y = 6$

D) $y = -\frac{11}{10}$

Answer: A

156) $14(2x - 6) = 7x - 6$

A) $x = -\frac{26}{7}$

B) $x = \frac{78}{35}$

C) $x = \frac{26}{7}$

D) $x = \frac{30}{7}$

Answer: C

157) $4(x + 4) = 5(x - 4)$

A) $x = 4$
B) $x = -36$
C) $x = -4$
D) $x = 36$

Answer: D

158) $3(2x - 3) = 5(x + 5)$

A) $x = 19$
B) $x = -16$
C) $x = 16$
D) $x = 34$

Answer: D

159) $-7(x - 1) - (-8x - 8) = -2$

A) $x = -17$
B) $x = 13$
C) $x = 17$
D) $x = 9$

Answer: A

Solve for x.

160) $6(x - 7) - (5x + 5) = 6$

A) $x = -53$
B) $x = -41$
C) $x = 53$
D) $x = -18$

Answer: C

161) $\frac{2}{5}x - \frac{1}{3}x = 4$

A) $x = -60$
B) $x = -120$
C) $x = 60$
D) $x = 120$

Answer: C

162) $\frac{3}{5}x + \frac{1}{2} = -\frac{2}{5}x - \frac{3}{10}$

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

B) $x = -\frac{3}{8}$

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

D) $x = \frac{1}{5}$

Answer: A

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163) $\frac{-7x + 8}{4} + 1 = -\frac{4x}{7}$

A) $x = -\frac{28}{33}$

B) $x = \frac{84}{65}$

C) $x = \frac{28}{11}$

D) $x = \frac{28}{33}$

Answer: C

164) $\frac{1}{4}(x - 8) + \frac{1}{5}(x + 5) = x - 4$

A) $x = \frac{60}{11}$

B) $x = \frac{140}{11}$

C) $x = \frac{100}{11}$

D) $x = \frac{20}{11}$

Answer: A

Provide an appropriate response.

165) Solve for W. $P = 2L + 2W$

A) $W = d - 2L$

B) $W = \frac{P - L}{2}$

C) $W = \frac{P - 2L}{2}$

D) $W = P - L$

Answer: C

166) Solve for w. $\frac{3w}{4} = 5 - \frac{1}{3}(x + 12)$

A) $w = \frac{4 - 4x}{3}$

B) $w = \frac{108 - 4x}{9}$

C) $w = \frac{12 - 4x}{3}$

D) $w = \frac{12 - 4x}{9}$

Answer: D

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167) Solve for b. $A = \frac{1}{2}h(a + b)$

A) $b = \frac{2Aa - h}{h}$

B) $b = \frac{2A - ah}{h}$

C) $b = \frac{A - ah}{2h}$

D) $b = \frac{ah - 2A}{h}$

Answer: B

168) Solve for y. $4ax(3 - y) = 5axy - 7$

A) $y = \frac{12ax + 7}{ax}$

B) $y = \frac{12ax - 7}{9ax}$

C) $y = \frac{12ax + 7}{9ax}$

D) $y = \frac{12ax - 7}{ax}$

Answer: B

169) Solve for h. $V = \frac{1}{3}Bh$

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

B) $h = \frac{B}{3V}$

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

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

Answer: C

170) Solve the formula A = LW for L. Use the result to find the room's length if the width of a room is 9 feet, and the area of the room is 108 square feet.

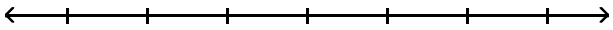
A) L = 12 ft
B) L = 99 ft
C) L = 45 ft
D) L = 972 ft

Answer: A

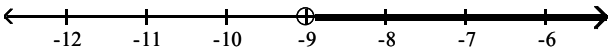
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Solve and graph the inequality.

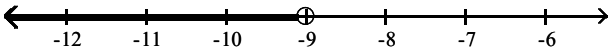
171) $-6(6x - 1) < -42x - 48$



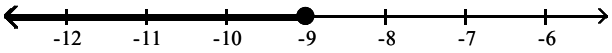
A) $x > -9$



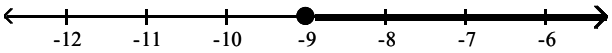
B) $x < -9$



C) $x \leq -9$

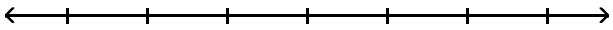


D) $x \geq -9$

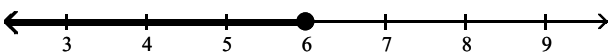


Answer: B

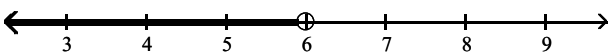
172) $12x + 15 - 3(3x + 11) \geq 0$



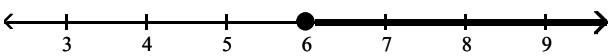
A) $x \leq 6$



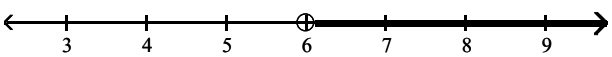
B) $x < 6$



C) $x \geq 6$



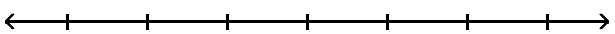
D) $x > 6$



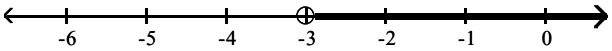
Answer: C

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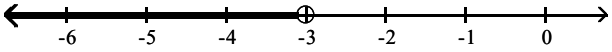
173) $-7x + 2 > -8x - 1$



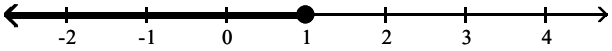
A) $x > -3$



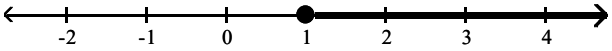
B) $x < -3$



C) $x \leq 1$

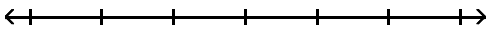


D) $x \geq 1$

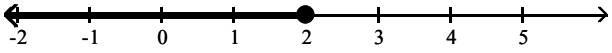


Answer: A

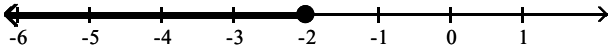
174) $\frac{3}{5}(x + 5) \leq \frac{9}{10}(x + 4)$



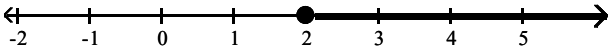
A) $x \leq 2$



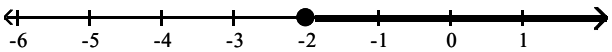
B) $x \leq -2$



C) $x \geq 2$



D) $x \geq -2$



Answer: D

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