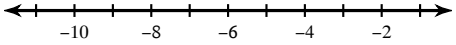
Algebra 2 Name_____ ID: 1

Assignment

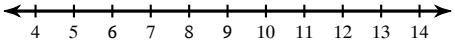
Date_____ Period____

Solve each inequality and graph its solution.

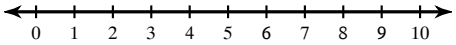
1) $5(1 - 2m) \geq 85$



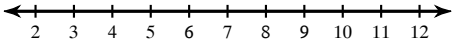
2) $-371 > 7(3 - 7x)$



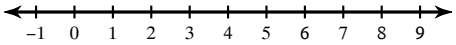
3) $-5 - 8(8 + 7n) > -181$



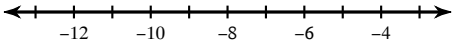
4) $-120 \geq -7n - 2(3n + 8)$



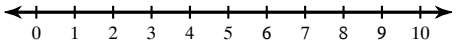
5) $8(7b + 3) \leq 416$



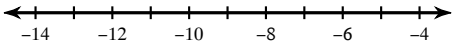
6) $98 \geq -2(8x + 7)$



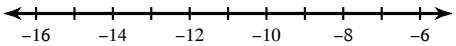
7) $86 \leq 2(8 + 7x)$



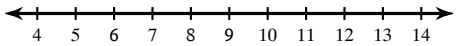
8) $112 > -8(x - 7)$



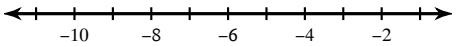
9) $-8(1 - 2a) < -136$



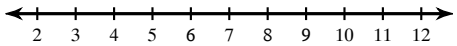
10) $-7(8a - 6) > -350$



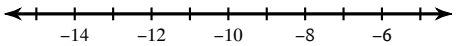
11) $-88 \geq 4(4p + 2)$



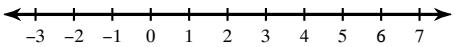
12) $92 \geq -4(1 - 4n)$



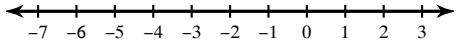
13) $5 + 2(3 - 5n) \leq 91$



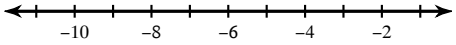
14) $6(7 + 7k) > 168$



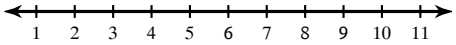
15) $-4(4-5x) < -96$



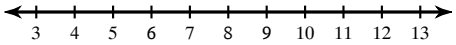
16) $-7+8(v-6) < -95$



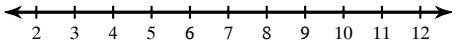
17) $-7-4(6m-6) \le -175$



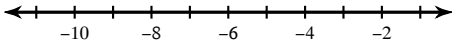
18) $396 > -6(-8a-2)$



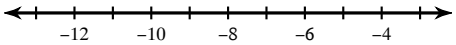
19) $-87 \ge -1-2(8+5x)$



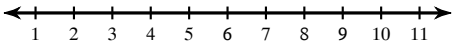
20) $-5(1-2b) \le -85$



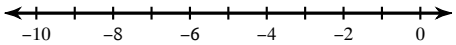
21) $4(2+3x)+5x < -128$



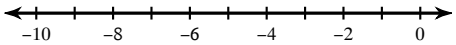
22) $-119 > -7(4p+5)$



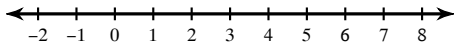
23) $91 \ge -5(1+5m)-4$



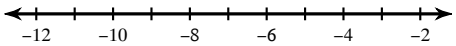
24) $-7(1+6n) \ge 119$



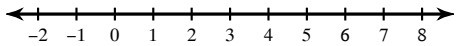
25) $102 > 6(4k-7)$



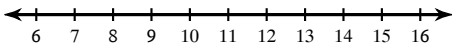
26) $143 < 7-8(7+6x)$



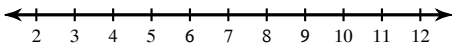
27) $8(1+7x) \le 288$



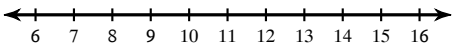
28) $82 > -2(7-6n)$



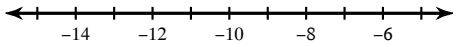
29) $359 \le 8(7v+8)+3v$



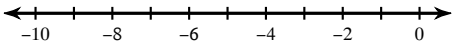
30) $-82 \ge -2-8(x+2)$



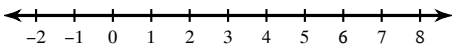
31) $5 + 2(6 - 5x) < 87$



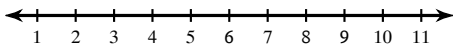
32) $-81 < -(1 - 2b) + 8b$



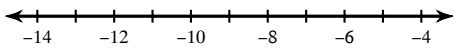
33) $95 \geq 5(1 + 3n)$



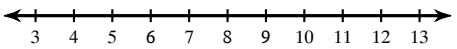
34) $-285 \leq -5(1 + 7k)$



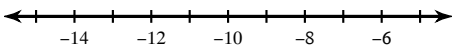
35) $112 > -4(2 + 5v)$



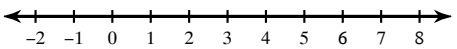
36) $220 \leq 8(4x + 2) + 2x$



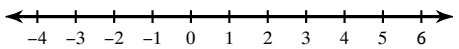
37) $-85 \geq -3(7 - 5a) - 7a$



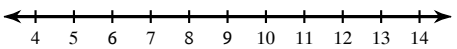
38) $-8(6x - 2) \leq -128$



39) $98 \leq -7(1 - 5x)$

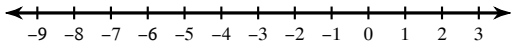


40) $-8(2n + 7) \leq -152$

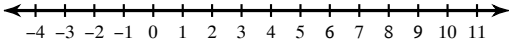


Solve each compound inequality and graph its solution.

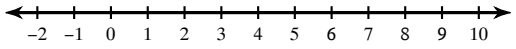
41) $m - 9 \leq -9$ and $m + 10 \geq 3$



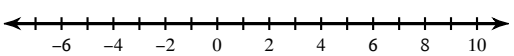
42) $-8 + v \geq -9$ and $\frac{v}{3} \leq 3$



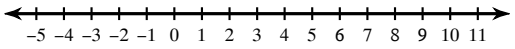
43) $x - 8 \leq -2$ and $\frac{x}{4} \geq 0$



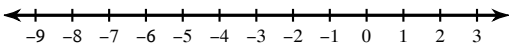
44) $4 \leq x + 9 < 17$



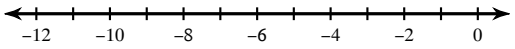
45) $-4x \geq -36$ and $x + 9 \geq 5$



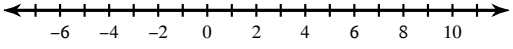
46) $k + 2 > -4$ and $k - 5 \leq -8$



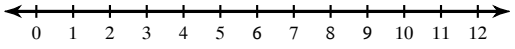
47) $x - 3 \leq -4$ and $x + 1 \geq -6$



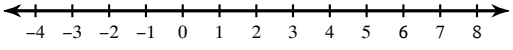
48) $\frac{m}{10} \leq 1$ and $5m \geq -25$



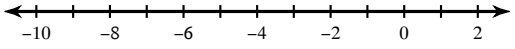
49) $-5 + p < 4$ and $-4 + p \geq -1$



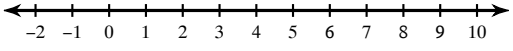
50) $-9 \leq x - 7 \leq -3$



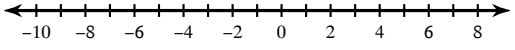
51) $8v < -16$ and $v - 9 \geq -14$



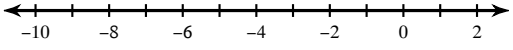
52) $x - 4 \leq 2$ and $\frac{x}{10} \geq 0$



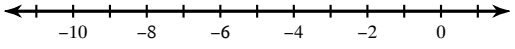
53) $7x \geq -63$ and $x - 10 < -5$



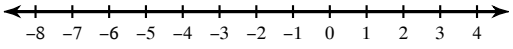
54) $m - 10 > -14$ and $-1 + m \leq -4$



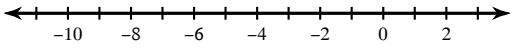
55) $-5x < 45$ and $\frac{x}{7} < -1$



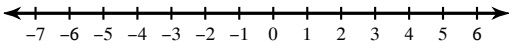
56) $-7x < 35$ and $x - 4 < -3$



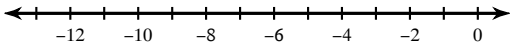
57) $-10 > k - 10 \geq -20$



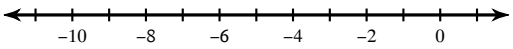
58) $-13 \leq p - 7 < -4$



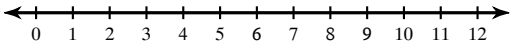
59) $-5r < 50$ and $r + 4 \leq 3$



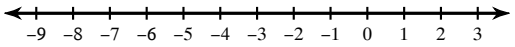
60) $\frac{n}{7} < 0$ and $n - 10 > -15$



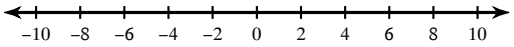
61) $n - 5 \geq 2$ or $-5n \geq -20$



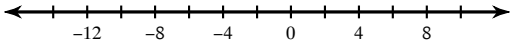
62) $n - 4 \leq -8$ or $4 + n > 3$



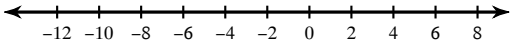
63) $-9b \geq 54$ or $\frac{b}{7} > 1$



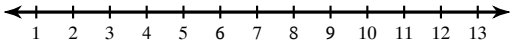
64) $\frac{k}{8} \geq 1$ or $k - 7 \leq -17$



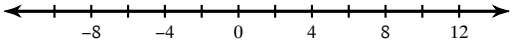
65) $a + 5 > 9$ or $a - 8 \leq -18$



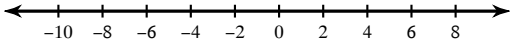
66) $m - 7 < -1$ or $5m \geq 50$



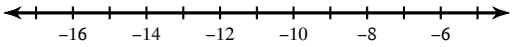
67) $3x \leq -21$ or $\frac{x}{9} > 1$



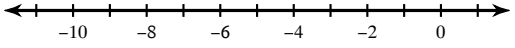
68) $-6 + x \leq -12$ or $-5x \leq -30$



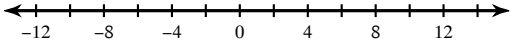
69) $n - 2 < -12$ or $9n \geq -81$



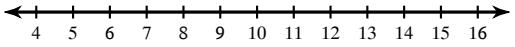
70) $\frac{b}{7} \geq -1$ or $b + 6 < -2$



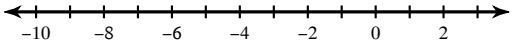
71) $-10 + n > -1$ or $\frac{n}{7} < -1$



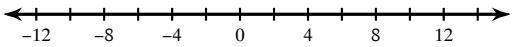
72) $5 + x < 13$ or $4x > 40$



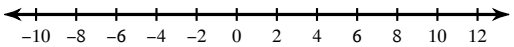
73) $5r < -30$ or $\frac{r}{9} \geq 0$



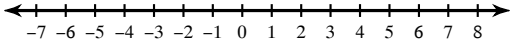
74) $10m > 100$ or $3m \leq -24$



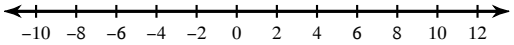
75) $5x \leq -30$ or $10x > 90$



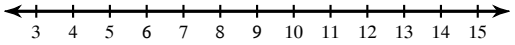
76) $n - 2 \geq 1$ or $\frac{n}{2} \leq -2$



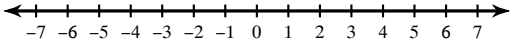
77) $b - 1 \le -7$ or $\frac{b}{4} \ge 2$



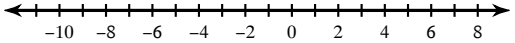
78) $n - 7 > 3$ or $n + 7 \le 15$



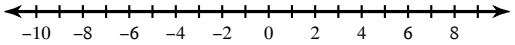
79) $5 + x > 8$ or $x + 2 \le 0$



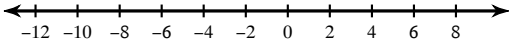
80) $r - 7 \le -15$ or $-6 + r \ge -1$



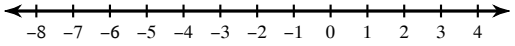
81) $-49 < -7k \le 56$



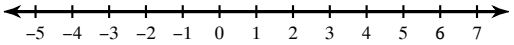
82) $-35 \le -5x \le 50$



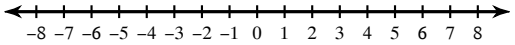
83) $-5 \le n - 1 \le -2$



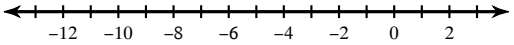
84) $-5 \le x - 3 < 2$



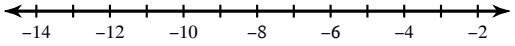
85) $-5 < v + 2 \le 7$



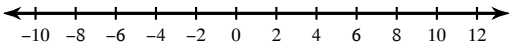
86) $-1 \le \frac{x}{10} \le 0$



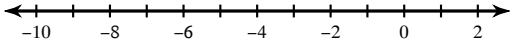
87) $-14 \le -4 + a \le -9$



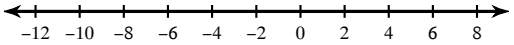
88) $-1 < \frac{x}{9} < 1$



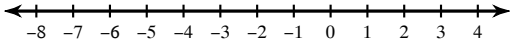
89) $-2 \le \frac{b}{3} < -1$



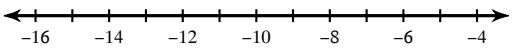
90) $3 \ge -2 + p > -11$



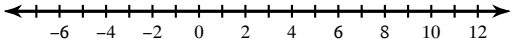
91) $-13 < k - 6 < -5$



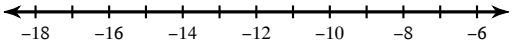
92) $-2 \le \frac{x}{5} < -1$



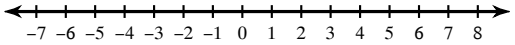
93) $-9 < m - 3 \leq 6$



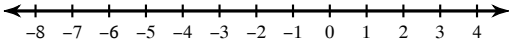
94) $-5 \leq \frac{b}{2} < -4$



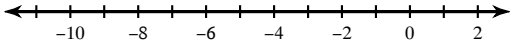
95) $-1 < \frac{n}{6} < 1$



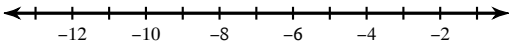
96) $-12 \leq x - 7 < -4$



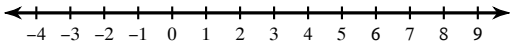
97) $-1 \leq \frac{n}{9} \leq 0$



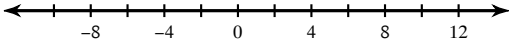
98) $-2 < \frac{k}{3} < -1$



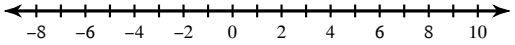
99) $-1 \leq \frac{a}{3} < 2$



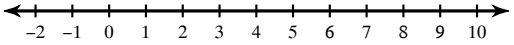
100) $-16 \leq r - 7 \leq 3$



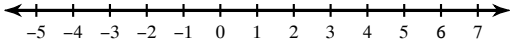
101) $7r - 8 < 41$ and $2 - 5r \leq 32$



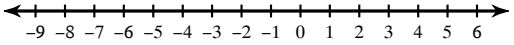
102) $-12 \leq -2k + 6 < 6$



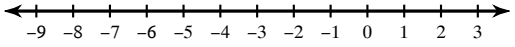
103) $-24 \leq 6p - 6 \leq 24$



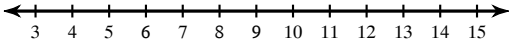
104) $5 - 10x \leq 75$ and $-6 - 2x > -14$



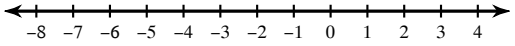
105) $-18 \leq 8x - 2 < 14$



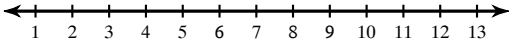
106) $15 \leq 5n - 10 < 25$



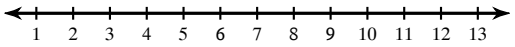
107) $-59 \leq 9m + 4 < 22$



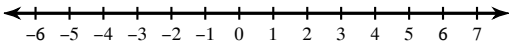
108) $19 < 4 + 5p < 54$



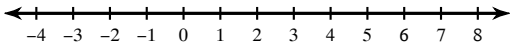
109) $26 < 8 + 3a < 38$



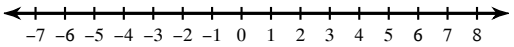
110) $-26 < -7x + 9 \leq 30$



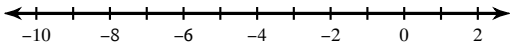
111) $8x - 10 > -2$ and $3x - 3 < 9$



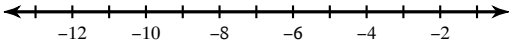
112) $-25 < -4 - 3k \leq 8$



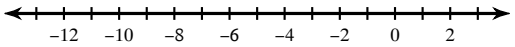
113) $-30 < 5n + 5 < 5$



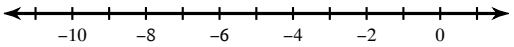
114) $-37 \leq 6x - 7 \leq -31$



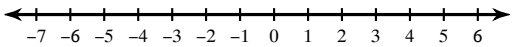
115) $1 < 9 - 4n \leq 49$



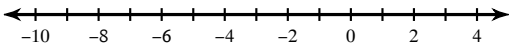
116) $-14 < 3v + 4 < -5$



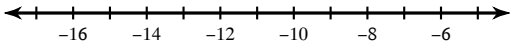
117) $12 \geq -2n + 4 > -4$



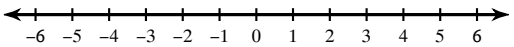
118) $3x + 5 < 11$ and $x - 9 > -17$



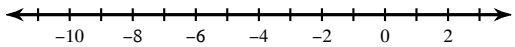
119) $4p + 5 \geq -23$ and $1 + 2p \leq -11$



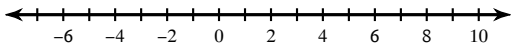
120) $10v + 7 > -33$ and $3 - 10v \geq -17$



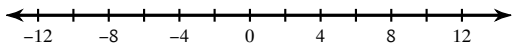
121) $2 + 2m < -12$ or $7m + 10 > -4$



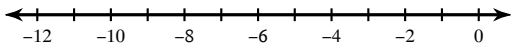
122) $2x + 1 \leq -7$ or $3x + 6 > 21$



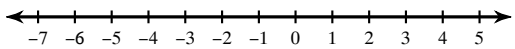
123) $4b + 3 > 35$ or $b + 3 < -6$



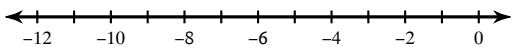
124) $2x + 4 \geq -4$ or $1 - 2x \geq 17$



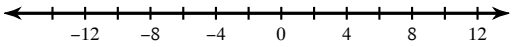
125) $5x + 3 > 3$ or $8x - 6 \leq -14$



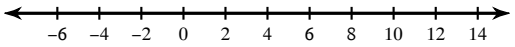
126) $7n - 1 \leq -50$ or $5 + 2n > -7$



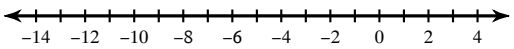
127) $3x + 8 < -22$ or $3 - 3x < -24$



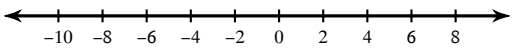
128) $-b + 8 > 10$ or $3b - 9 > 18$



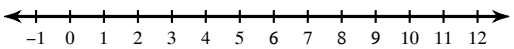
129) $-10n + 6 \geq 106$ or $7 - 5n < 2$



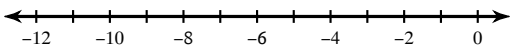
130) $5b + 8 < -27$ or $-3 - 2b \leq -15$



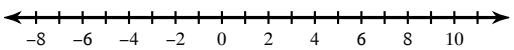
131) $3b + 3 > 30$ or $2b + 7 < 15$



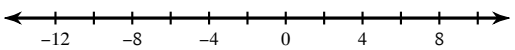
132) $-8n + 5 < 53$ or $6n + 4 < -38$



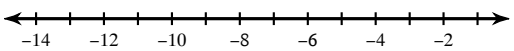
133) $2 - 10m \leq -78$ or $1 + 6m \leq -23$



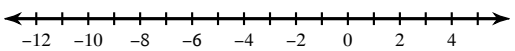
134) $8x - 7 \geq 33$ or $-9x + 4 > 85$



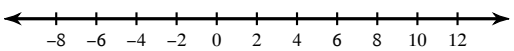
135) $9x - 2 > -47$ or $3x + 2 \leq -25$



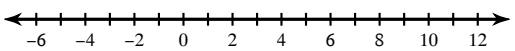
136) $-7 - x < -9$ or $10x - 3 \leq -93$



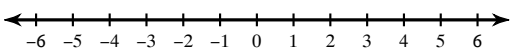
137) $-2x - 8 \leq -28$ or $10 + 9x \leq -26$



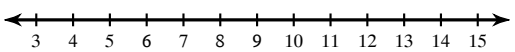
138) $5n - 8 > 37$ or $4n + 8 \leq 4$



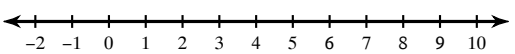
139) $4n - 9 \leq -21$ or $10n - 9 > 11$



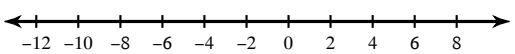
140) $-2b - 5 \leq -25$ or $2 - 10b > -88$



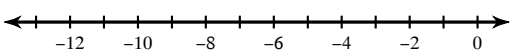
141) $16 > -8 + 4x \geq -8$



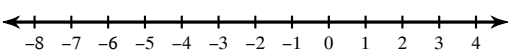
142) $3 - 3r \geq 27$ or $7r - 1 > 34$



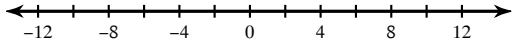
143) $8a - 2 > -26$ or $-4 + 9a \leq -94$



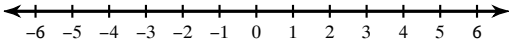
144) $-25 \leq 5n + 5 < 15$



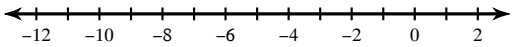
145) $-9n + 4 < -86$ or $10n + 9 < -71$



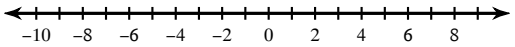
146) $19 \geq 3 - 8n > -21$



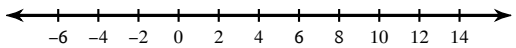
147) $16 \leq 10 - 6x < 70$



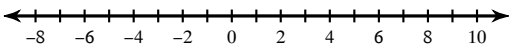
148) $10 - 2k \geq 20$ or $-3k + 2 \leq -16$



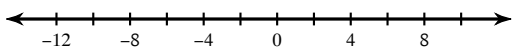
149) $4n - 5 \leq -13$ or $-2n - 6 \leq -26$



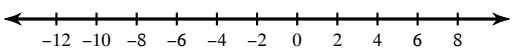
150) $-52 \leq -8x + 4 < 60$



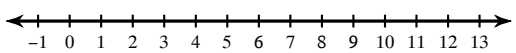
151) $6x - 9 > 27$ or $7 + 2x \leq -13$



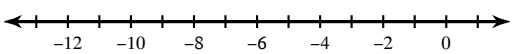
152) $x + 5 > 10$ or $2x + 2 < -18$



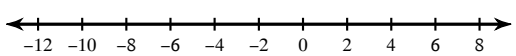
153) $4p - 10 \leq 6$ or $8 + 10p \geq 88$



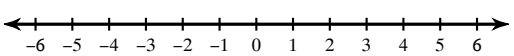
154) $5b + 3 \geq -7$ or $1 - b > 11$



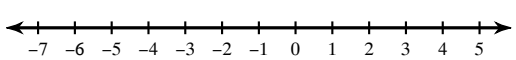
155) $2n - 9 \leq -25$ or $6n + 7 > 31$



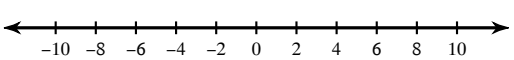
156) $-12 < 10p + 8 \leq 28$



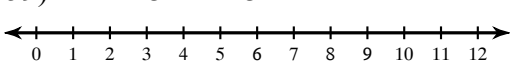
157) $6a + 7 > 1$ or $4a - 3 \leq -15$



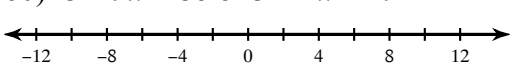
158) $-93 < -9x - 3 \leq 69$



159) $-2 \leq -5 + r \leq 5$



160) $8 + 9x \geq 80$ or $3 - 2x > 19$



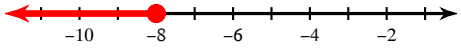
Algebra 2 Name_____ ID: 1

Assignment

Date_____ Period____

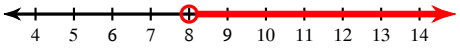
Solve each inequality and graph its solution.

1) $5(1 - 2m) \geq 85$



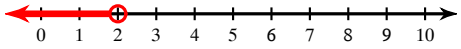
$m \leq -8$

2) $-371 > 7(3 - 7x)$



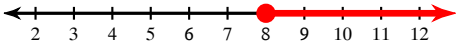
$x > 8$

3) $-5 - 8(8 + 7n) > -181$



$n < 2$

4) $-120 \geq -7n - 2(3n + 8)$

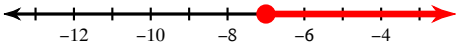


$n \geq 8$

5) $8(7b + 3) \leq 416$

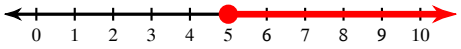
$b \leq 7$

6) $98 \geq -2(8x + 7)$



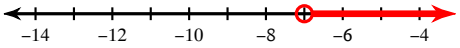
$x \geq -7$

7) $86 \leq 2(8 + 7x)$



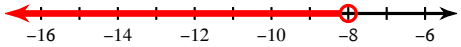
$x \geq 5$

8) $112 > -8(x - 7)$



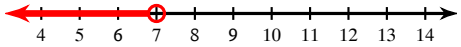
$x > -7$

9) $-8(1 - 2a) < -136$



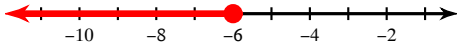
$a < -8$

10) $-7(8a - 6) > -350$



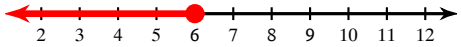
$a < 7$

11) $-88 \geq 4(4p + 2)$



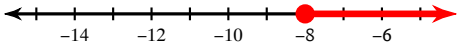
$p \leq -6$

12) $92 \geq -4(1 - 4n)$



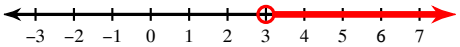
$n \leq 6$

13) $5 + 2(3 - 5n) \leq 91$



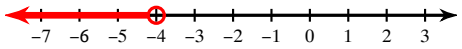
$n \geq -8$

14) $6(7 + 7k) > 168$



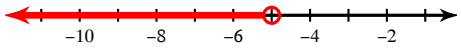
$k > 3$

15) $-4(4-5x) < -96$



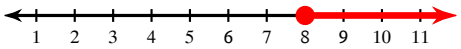
$x < -4$

16) $-7 + 8(v-6) < -95$



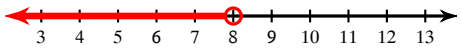
$v < -5$

17) $-7 - 4(6m-6) \le -175$



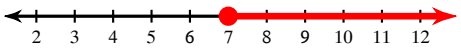
$m \ge 8$

18) $396 > -6(-8a-2)$



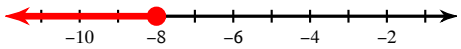
$a < 8$

19) $-87 \ge -1 - 2(8+5x)$



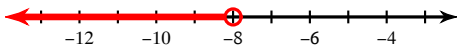
$x \ge 7$

20) $-5(1-2b) \le -85$



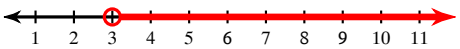
$b \le -8$

21) $4(2+3x) + 5x < -128$



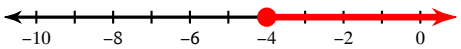
$x < -8$

22) $-119 > -7(4p+5)$



$p > 3$

23) $91 \ge -5(1+5m) - 4$

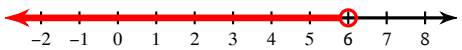


$m \ge -4$

24) $-7(1+6n) \ge 119$

$n \le -3$

25) $102 > 6(4k-7)$

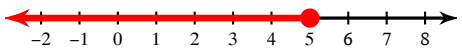


$k < 6$

26) $143 < 7 - 8(7+6x)$

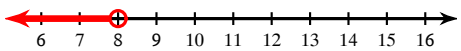
$x < -4$

27) $8(1+7x) \le 288$



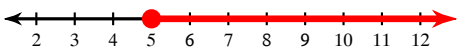
$x \le 5$

28) $82 > -2(7-6n)$



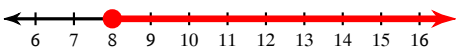
$n < 8$

29) $359 \le 8(7v+8) + 3v$



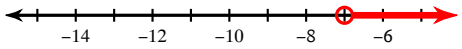
$v \ge 5$

30) $-82 \ge -2 - 8(x+2)$



$x \ge 8$

31) $5 + 2(6 - 5x) < 87$

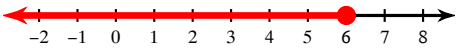


$x > -7$

32) $-81 < -(1 - 2b) + 8b$

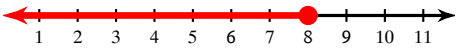
$b > -8$

33) $95 \geq 5(1 + 3n)$



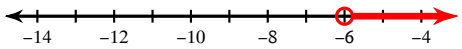
$n \leq 6$

34) $-285 \leq -5(1 + 7k)$



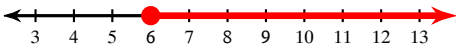
$k \leq 8$

35) $112 > -4(2 + 5v)$



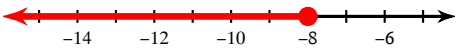
$v > -6$

36) $220 \leq 8(4x + 2) + 2x$



$x \geq 6$

37) $-85 \geq -3(7 - 5a) - 7a$

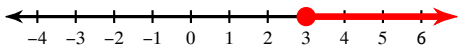


$a \leq -8$

38) $-8(6x - 2) \leq -128$

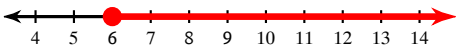
$x \geq 3$

39) $98 \leq -7(1 - 5x)$



$x \geq 3$

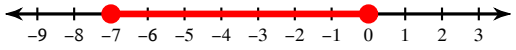
40) $-8(2n + 7) \leq -152$



$n \geq 6$

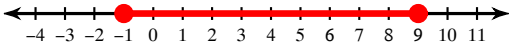
Solve each compound inequality and graph its solution.

41) $m - 9 \leq -9$ and $m + 10 \geq 3$



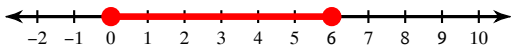
$-7 \leq m \leq 0$

42) $-8 + v \geq -9$ and $\frac{v}{3} \leq 3$



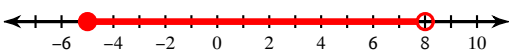
$-1 \leq v \leq 9$

43) $x - 8 \leq -2$ and $\frac{x}{4} \geq 0$



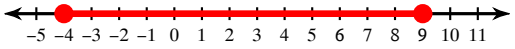
$0 \leq x \leq 6$

44) $4 \leq x + 9 < 17$



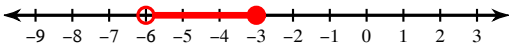
$-5 \leq x < 8$

45) $-4x \geq -36$ and $x + 9 \geq 5$



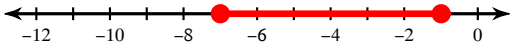
$-4 \leq x \leq 9$

46) $k + 2 > -4$ and $k - 5 \leq -8$



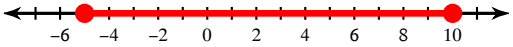
$-6 < k \leq -3$

47) $x - 3 \leq -4$ and $x + 1 \geq -6$



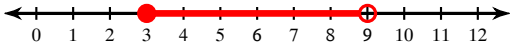
$-7 \leq x \leq -1$

48) $\frac{m}{10} \leq 1$ and $5m \geq -25$



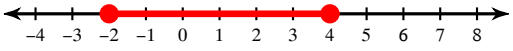
$-5 \leq m \leq 10$

49) $-5 + p < 4$ and $-4 + p \geq -1$



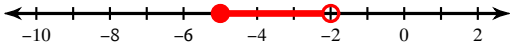
$3 \leq p < 9$

50) $-9 \leq x - 7 \leq -3$



$-2 \leq x \leq 4$

51) $8v < -16$ and $v - 9 \geq -14$

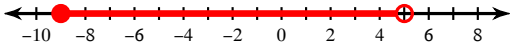


$-5 \leq v < -2$

52) $x - 4 \leq 2$ and $\frac{x}{10} \geq 0$

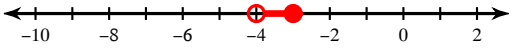
$0 \leq x \leq 6$

53) $7x \geq -63$ and $x - 10 < -5$



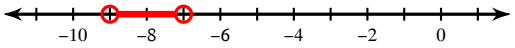
$-9 \leq x < 5$

54) $m - 10 > -14$ and $-1 + m \leq -4$



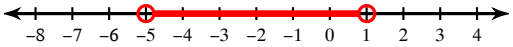
$-4 < m \leq -3$

55) $-5x < 45$ and $\frac{x}{7} < -1$



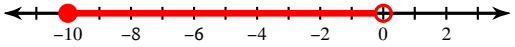
$-9 < x < -7$

56) $-7x < 35$ and $x - 4 < -3$



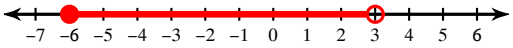
$-5 < x < 1$

57) $-10 > k - 10 \geq -20$



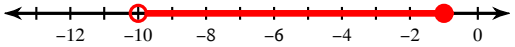
$-10 \leq k < 0$

58) $-13 \leq p - 7 < -4$



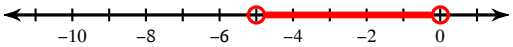
$-6 \leq p < 3$

59) $-5r < 50$ and $r + 4 \leq 3$



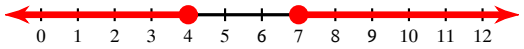
$-10 < r \leq -1$

60) $\frac{n}{7} < 0$ and $n - 10 > -15$



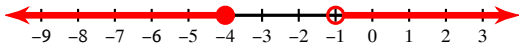
$-5 < n < 0$

61) $n - 5 \geq 2$ or $-5n \geq -20$



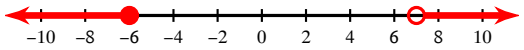
$n \geq 7$ or $n \leq 4$

62) $n - 4 \leq -8$ or $4 + n > 3$



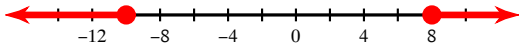
$n \leq -4$ or $n > -1$

63) $-9b \geq 54$ or $\frac{b}{7} > 1$



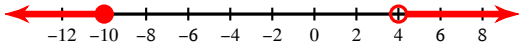
$b \leq -6$ or $b > 7$

64) $\frac{k}{8} \geq 1$ or $k - 7 \leq -17$



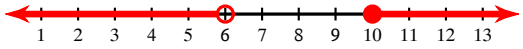
$k \geq 8$ or $k \leq -10$

65) $a + 5 > 9$ or $a - 8 \leq -18$



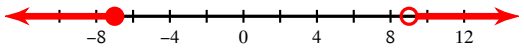
$a > 4$ or $a \leq -10$

66) $m - 7 < -1$ or $5m \geq 50$



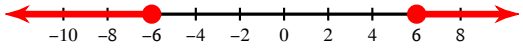
$m < 6$ or $m \geq 10$

67) $3x \leq -21$ or $\frac{x}{9} > 1$



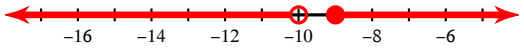
$x \leq -7$ or $x > 9$

68) $-6 + x \leq -12$ or $-5x \leq -30$



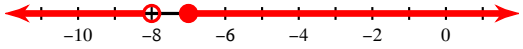
$x \leq -6$ or $x \geq 6$

69) $n - 2 < -12$ or $9n \geq -81$



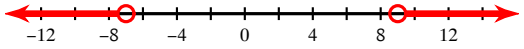
$n < -10$ or $n \geq -9$

70) $\frac{b}{7} \geq -1$ or $b + 6 < -2$



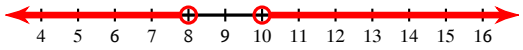
$b \geq -7$ or $b < -8$

71) $-10 + n > -1$ or $\frac{n}{7} < -1$



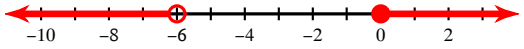
$n > 9$ or $n < -7$

72) $5 + x < 13$ or $4x > 40$



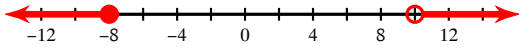
$x < 8$ or $x > 10$

73) $5r < -30$ or $\frac{r}{9} \geq 0$



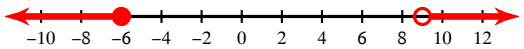
$r < -6$ or $r \geq 0$

74) $10m > 100$ or $3m \leq -24$



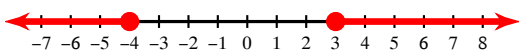
$m > 10$ or $m \leq -8$

75) $5x \leq -30$ or $10x > 90$



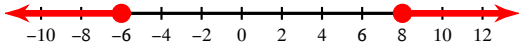
$x \leq -6$ or $x > 9$

76) $n - 2 \geq 1$ or $\frac{n}{2} \leq -2$



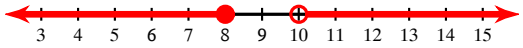
$n \geq 3$ or $n \leq -4$

77) $b - 1 \le -7$ or $\frac{b}{4} \ge 2$



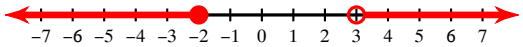
$b \le -6$ or $b \ge 8$

78) $n - 7 > 3$ or $n + 7 \le 15$



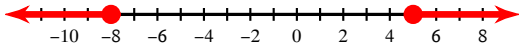
$n > 10$ or $n \le 8$

79) $5 + x > 8$ or $x + 2 \le 0$



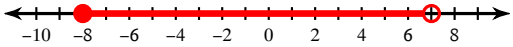
$x > 3$ or $x \le -2$

80) $r - 7 \le -15$ or $-6 + r \ge -1$



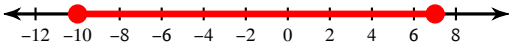
$r \le -8$ or $r \ge 5$

81) $-49 < -7k \le 56$



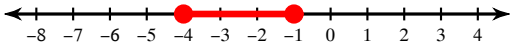
$-8 \le k < 7$

82) $-35 \le -5x \le 50$



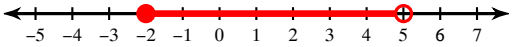
$-10 \le x \le 7$

83) $-5 \le n - 1 \le -2$



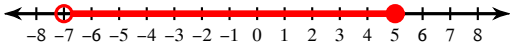
$-4 \le n \le -1$

84) $-5 \le x - 3 < 2$



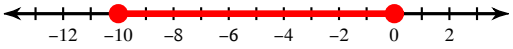
$-2 \le x < 5$

85) $-5 < v + 2 \le 7$



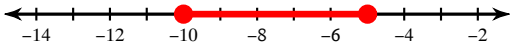
$-7 < v \le 5$

86) $-1 \le \frac{x}{10} \le 0$



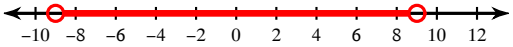
$-10 \le x \le 0$

87) $-14 \le -4 + a \le -9$



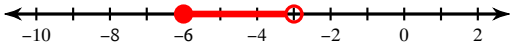
$-10 \le a \le -5$

88) $-1 < \frac{x}{9} < 1$



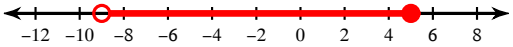
$-9 < x < 9$

89) $-2 \le \frac{b}{3} < -1$



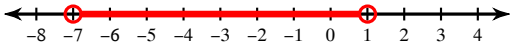
$-6 \le b < -3$

90) $3 \ge -2 + p > -11$



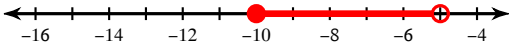
$-9 < p \le 5$

91) $-13 < k - 6 < -5$



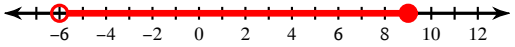
$-7 < k < 1$

92) $-2 \le \frac{x}{5} < -1$



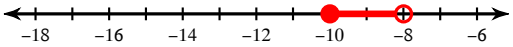
$-10 \le x < -5$

93) $-9 < m - 3 \le 6$



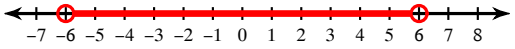
$-6 < m \le 9$

94) $-5 \le \frac{b}{2} < -4$



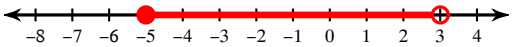
$-10 \le b < -8$

95) $-1 < \frac{n}{6} < 1$



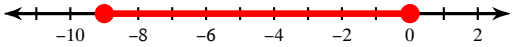
$-6 < n < 6$

96) $-12 \le x - 7 < -4$



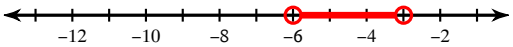
$-5 \le x < 3$

97) $-1 \le \frac{n}{9} \le 0$



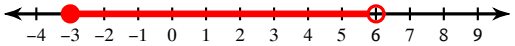
$-9 \le n \le 0$

98) $-2 < \frac{k}{3} < -1$



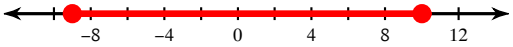
$-6 < k < -3$

99) $-1 \le \frac{a}{3} < 2$



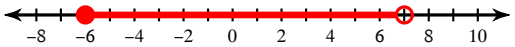
$-3 \le a < 6$

100) $-16 \le r - 7 \le 3$



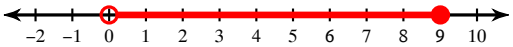
$-9 \le r \le 10$

101) $7r - 8 < 41$ and $2 - 5r \le 32$



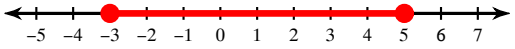
$-6 \le r < 7$

102) $-12 \le -2k + 6 < 6$



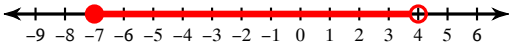
$0 < k \le 9$

103) $-24 \le 6p - 6 \le 24$



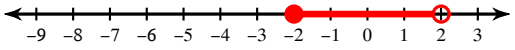
$-3 \le p \le 5$

104) $5 - 10x \le 75$ and $-6 - 2x > -14$



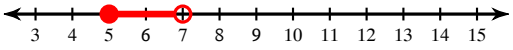
$-7 \le x < 4$

105) $-18 \le 8x - 2 < 14$



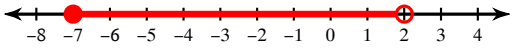
$-2 \le x < 2$

106) $15 \le 5n - 10 < 25$



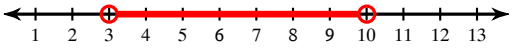
$5 \le n < 7$

107) $-59 \le 9m + 4 < 22$



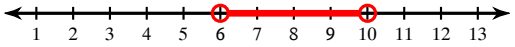
$-7 \le m < 2$

108) $19 < 4 + 5p < 54$



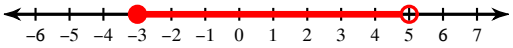
$3 < p < 10$

109) $26 < 8 + 3a < 38$



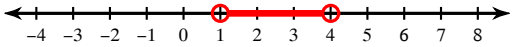
$6 < a < 10$

110) $-26 < -7x + 9 \leq 30$



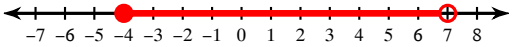
$-3 \leq x < 5$

111) $8x - 10 > -2$ and $3x - 3 < 9$



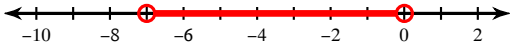
$1 < x < 4$

112) $-25 < -4 - 3k \leq 8$



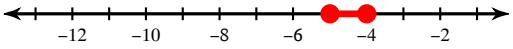
$-4 \leq k < 7$

113) $-30 < 5n + 5 < 5$



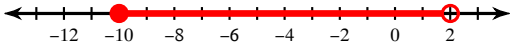
$-7 < n < 0$

114) $-37 \leq 6x - 7 \leq -31$



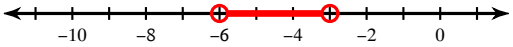
$-5 \leq x \leq -4$

115) $1 < 9 - 4n \leq 49$



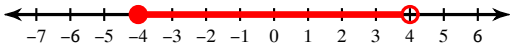
$-10 \leq n < 2$

116) $-14 < 3v + 4 < -5$



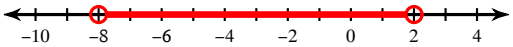
$-6 < v < -3$

117) $12 \geq -2n + 4 > -4$



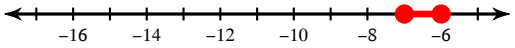
$-4 \leq n < 4$

118) $3x + 5 < 11$ and $x - 9 > -17$



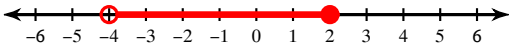
$-8 < x < 2$

119) $4p + 5 \geq -23$ and $1 + 2p \leq -11$



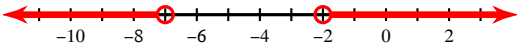
$-7 \leq p \leq -6$

120) $10v + 7 > -33$ and $3 - 10v \geq -17$



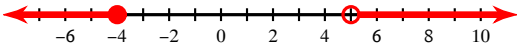
$-4 < v \leq 2$

121) $2 + 2m < -12$ or $7m + 10 > -4$



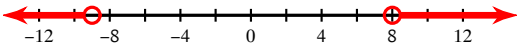
$m < -7$ or $m > -2$

122) $2x + 1 \leq -7$ or $3x + 6 > 21$



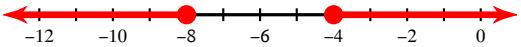
$x \leq -4$ or $x > 5$

123) $4b + 3 > 35$ or $b + 3 < -6$



$b > 8$ or $b < -9$

124) $2x + 4 \geq -4$ or $1 - 2x \geq 17$

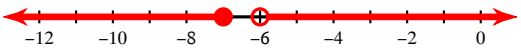


$x \geq -4$ or $x \leq -8$

125) $5x + 3 > 3$ or $8x - 6 \leq -14$

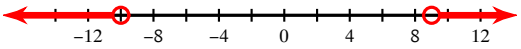
$x > 0$ or $x \leq -1$

126) $7n - 1 \leq -50$ or $5 + 2n > -7$



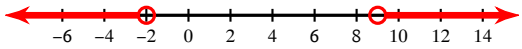
$n \leq -7$ or $n > -6$

127) $3x + 8 < -22$ or $3 - 3x < -24$



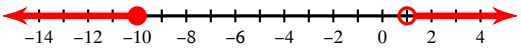
$x < -10$ or $x > 9$

128) $-b + 8 > 10$ or $3b - 9 > 18$



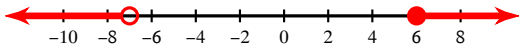
$b < -2$ or $b > 9$

129) $-10n + 6 \geq 106$ or $7 - 5n < 2$



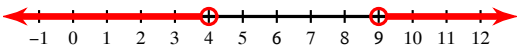
$n \leq -10$ or $n > 1$

130) $5b + 8 < -27$ or $-3 - 2b \leq -15$



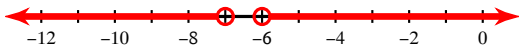
$b < -7$ or $b \geq 6$

131) $3b + 3 > 30$ or $2b + 7 < 15$



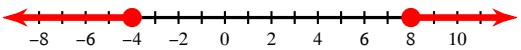
$b > 9$ or $b < 4$

132) $-8n + 5 < 53$ or $6n + 4 < -38$



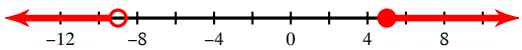
$n > -6$ or $n < -7$

133) $2 - 10m \leq -78$ or $1 + 6m \leq -23$



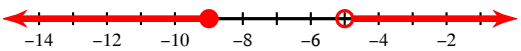
$m \geq 8$ or $m \leq -4$

134) $8x - 7 \geq 33$ or $-9x + 4 > 85$



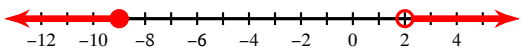
$x \geq 5$ or $x < -9$

135) $9x - 2 > -47$ or $3x + 2 \leq -25$



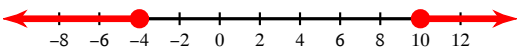
$x > -5$ or $x \leq -9$

136) $-7 - x < -9$ or $10x - 3 \leq -93$



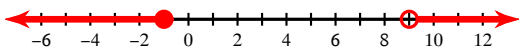
$x > 2$ or $x \leq -9$

137) $-2x - 8 \leq -28$ or $10 + 9x \leq -26$



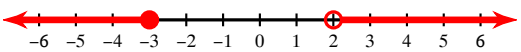
$x \geq 10$ or $x \leq -4$

138) $5n - 8 > 37$ or $4n + 8 \leq 4$



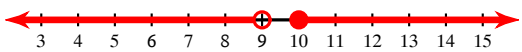
$n > 9$ or $n \leq -1$

139) $4n - 9 \leq -21$ or $10n - 9 > 11$



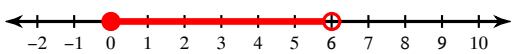
$n \leq -3$ or $n > 2$

140) $-2b - 5 \leq -25$ or $2 - 10b > -88$



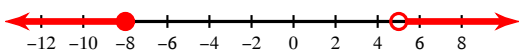
$b \geq 10$ or $b < 9$

141) $16 > -8 + 4x \geq -8$



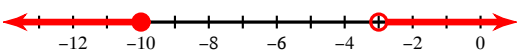
$0 \leq x < 6$

142) $3 - 3r \geq 27$ or $7r - 1 > 34$



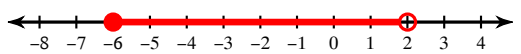
$r \leq -8$ or $r > 5$

143) $8a - 2 > -26$ or $-4 + 9a \leq -94$



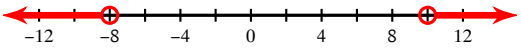
$a > -3$ or $a \leq -10$

144) $-25 \leq 5n + 5 < 15$



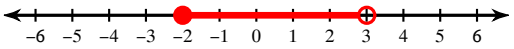
$-6 \leq n < 2$

145) $-9n + 4 < -86$ or $10n + 9 < -71$



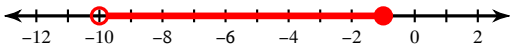
$n > 10$ or $n < -8$

146) $19 \geq 3 - 8n > -21$



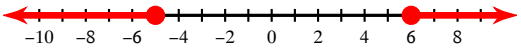
$-2 \leq n < 3$

147) $16 \leq 10 - 6x < 70$



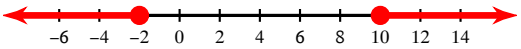
$-10 < x \leq -1$

148) $10 - 2k \geq 20$ or $-3k + 2 \leq -16$



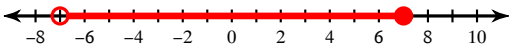
$k \leq -5$ or $k \geq 6$

149) $4n - 5 \leq -13$ or $-2n - 6 \leq -26$



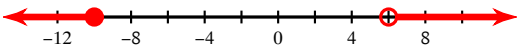
$n \leq -2$ or $n \geq 10$

150) $-52 \leq -8x + 4 < 60$



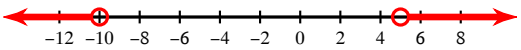
$-7 < x \leq 7$

151) $6x - 9 > 27$ or $7 + 2x \leq -13$



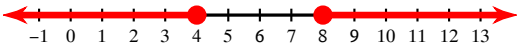
$x > 6$ or $x \leq -10$

152) $x + 5 > 10$ or $2x + 2 < -18$



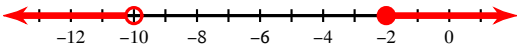
$x > 5$ or $x < -10$

153) $4p - 10 \leq 6$ or $8 + 10p \geq 88$



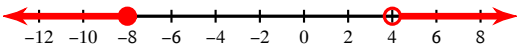
$p \leq 4$ or $p \geq 8$

154) $5b + 3 \geq -7$ or $1 - b > 11$



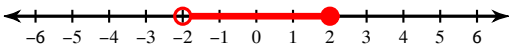
$b \geq -2$ or $b < -10$

155) $2n - 9 \leq -25$ or $6n + 7 > 31$



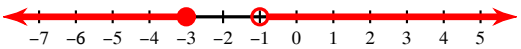
$n \leq -8$ or $n > 4$

156) $-12 < 10p + 8 \leq 28$



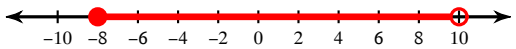
$-2 < p \leq 2$

157) $6a + 7 > 1$ or $4a - 3 \leq -15$



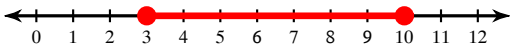
$a > -1$ or $a \leq -3$

158) $-93 < -9x - 3 \leq 69$



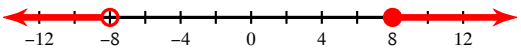
$-8 \leq x < 10$

159) $-2 \leq -5 + r \leq 5$



$3 \leq r \leq 10$

160) $8 + 9x \geq 80$ or $3 - 2x > 19$



$x \geq 8$ or $x < -8$