Lesson #10 B-2: Solving and Graphing One and Two Variable Inequalities and Compound Inequalities-Review   (Reference: Lessons #45, #50, #66, #70, #73, #77, #81, #82 & #97 in book)

Problem

1. For each of the following inequalities, solve the inequality for the given variable and then graph the inequality, and give me the solution set in inteval notation.

   1. $3(5x - 4) \le 30x + 3$

   2. $2(x - 8) - 3x > 6 - 3(2x + 4)$

3. For each of the following compound inequalities, please solve the inequality, graph the inequality, and give me the solution set for the inequality in interval notation.

   3. $-18 \le 6x - 8 + 4x \le 22$

   4. $-8 \le -4(2x - 2) + 12x + 4 \le 16$

   5. $-2x - 6 \ge -4$ or $-4(4 - x) \ge 20$

   6. $-5x - 6 + 2x < 6$ or $-2(x - 2) + x > 12$

7. For each of the following inequalities, please graph the inequalities and shade the solution region of the inequality on the coordinate plane.

   7. $y \le -2x + 4$

8. $-18x + 9y > -27$

9. $-6x + 3y \le 12$

10. $4x - 5y \ge -20$

11. $-8x - 2y < 2$

12. $6x + 12y \le -36$