Algebra 1 CC
Assignment #42
Graphs of Linear Inequalities

1. Determine which of following points lie in the solution set of the inequality $y \geq 2x - 4$ and which do not. Justify each choice.

   (a) $(5, 4)$ (b) $(0, -1)$ (c) $(10, 16)$ (d) $(2, -1)$

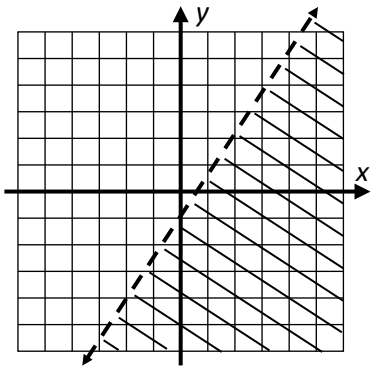
2. Which of the following points lies in the solution set of the inequality $y \geq 3x + 10$?

   (1) $(1, 10)$ (2) $(-1, 3)$ (3) $(4, 20)$ (4) $(2, 16)$

3. Which of the following points does *not* lie in the solution set to the inequality $y \geq -\frac{1}{3}x + 5$?

   (1) $(6, 3)$ (2) $(-6, 5)$ (3) $(-3, 8)$ (4) $(12, 3)$

4. Which of the following linear inequalities is shown graphed on the right?

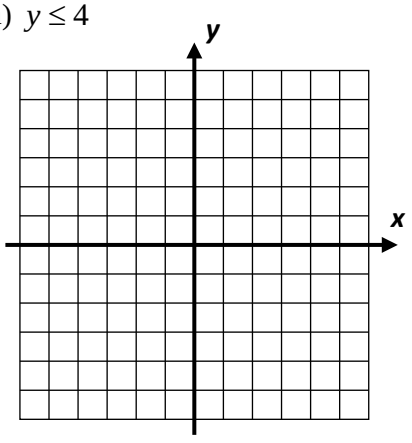


   (1) $y < \frac{3}{2}x - 1$ (3) $y > \frac{2}{3}x - 1$

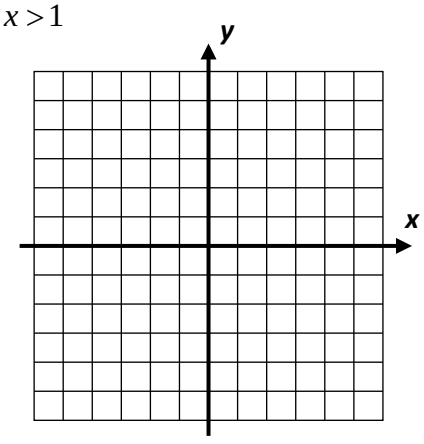
   (2) $y \leq \frac{2}{3}x - 1$ (4) $y \geq \frac{3}{2}x - 1$

5. Graph the solution set to each of the following inequalities.

   (a) $y \leq 4$



   (b) $x > 1$



R2. Solve for x and graph the solution set: $0.5(3 - 8x) < 10(1 - 0.5x)$

R3. Find the product: $(x - 1)(x^2 + 5x - 2)$

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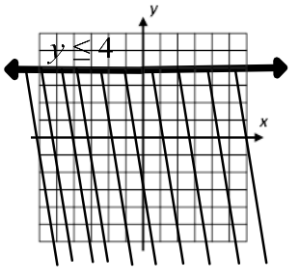
1. (a) No, $4 \ngeq 6$
   (b) Yes, $-1 \geq -4$
   (c) Yes, $16 \geq 16$
   (d) No, $-1 \ngeq 0$

2. (4)

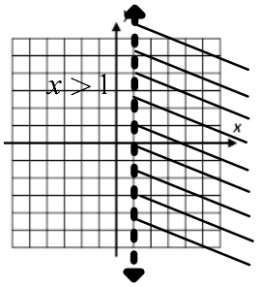
3. (2)

4. (1) $y < \frac{3}{2}x - 1$

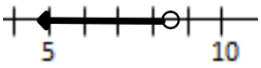
5. (a)



(b)



R2. $x < 8.5$



R3. $x^3 + 4x^2 - 7x + 2$