

Review: Graphing Linear Inequalities

Graph each Linear Inequality on a separate x-y axis

1) $y > 2$

2) $x \leq -1$

3) $y \geq 2x - 1$

4) $y < -\frac{1}{2}x + 2$

5) $x + y \geq 4$

6) $2x + y \leq 3$

7) $2x - 3y < 6$

8) $2x + 4y > 8$

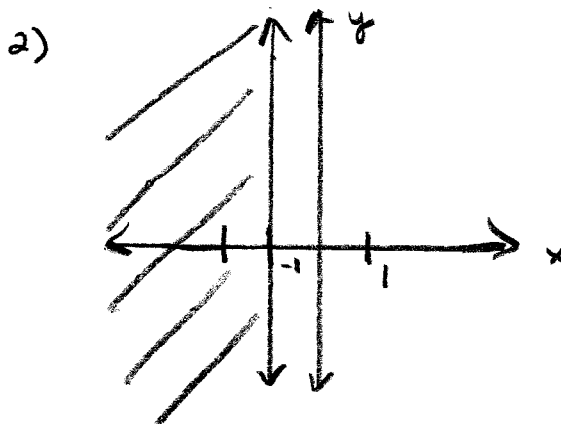
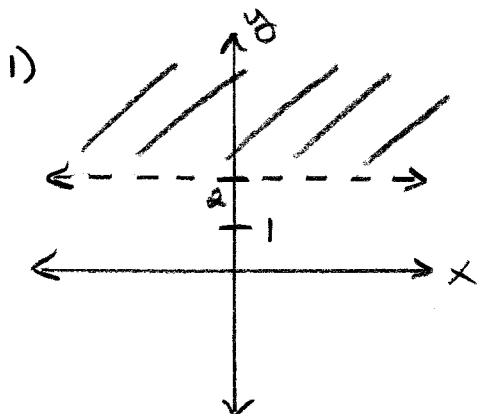
9) You have \$30 to spend in a pizza shop. Pizza slices cost \$2 each & sodas cost \$3 each. Let x represent the number of sodas you can buy & let y represent the number of pizza slices you can buy.

a) Write an inequality to model the number of sodas & number of pizza slices you can buy.

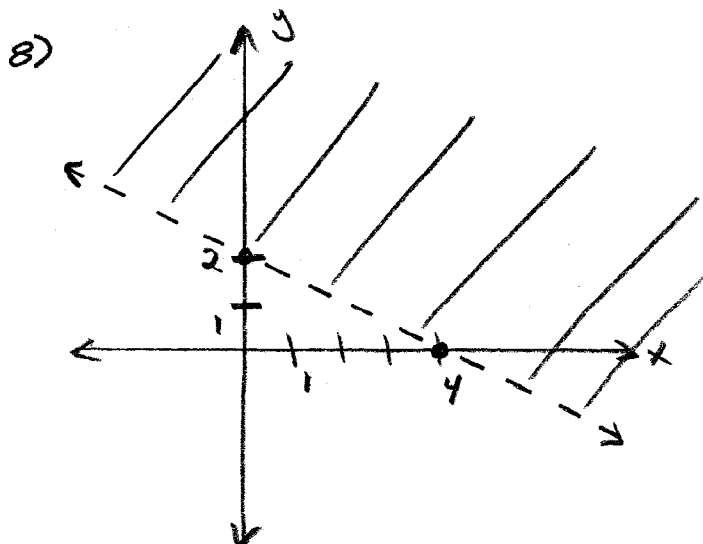
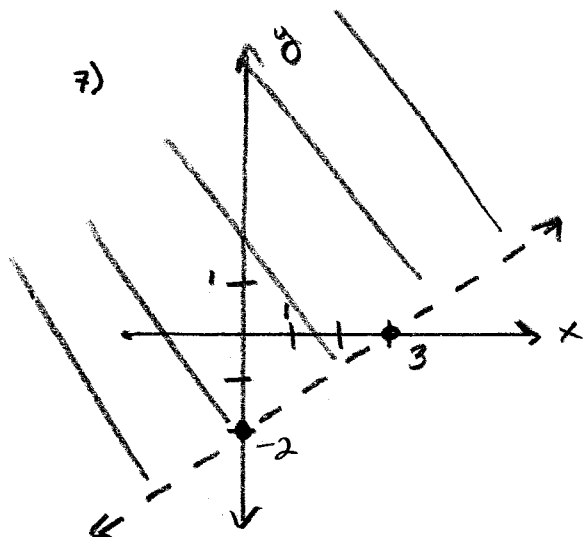
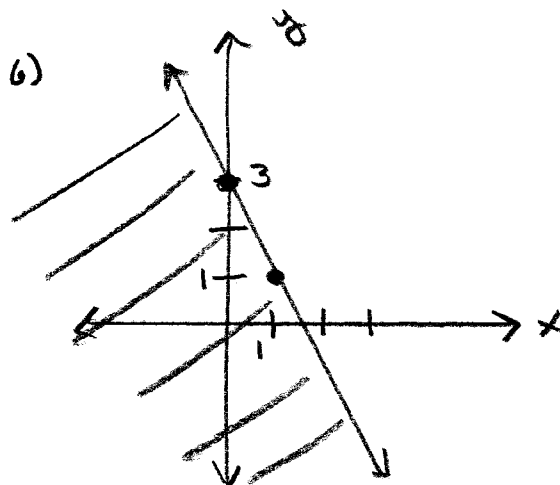
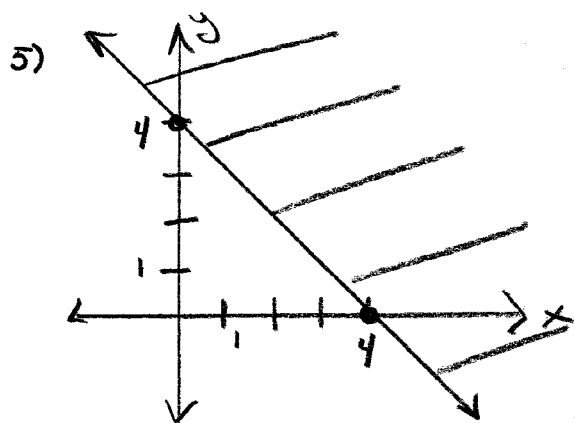
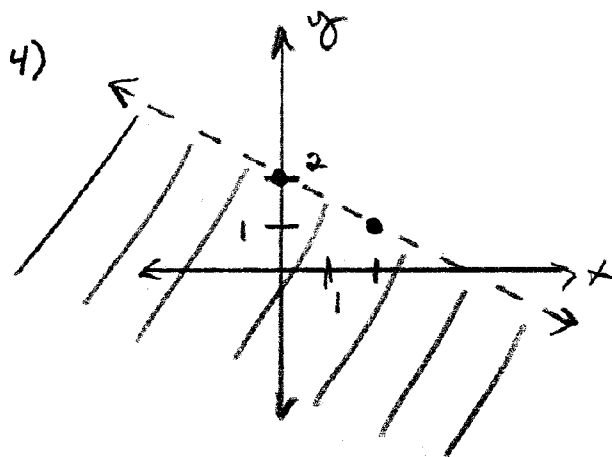
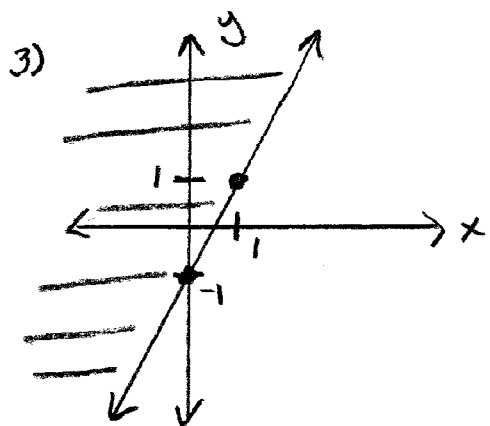
b) graph the inequality

c) Using the graph, answer the following: Is it possible to buy 6 sodas & 10 slices of pizza for you & your friends?

Answers:

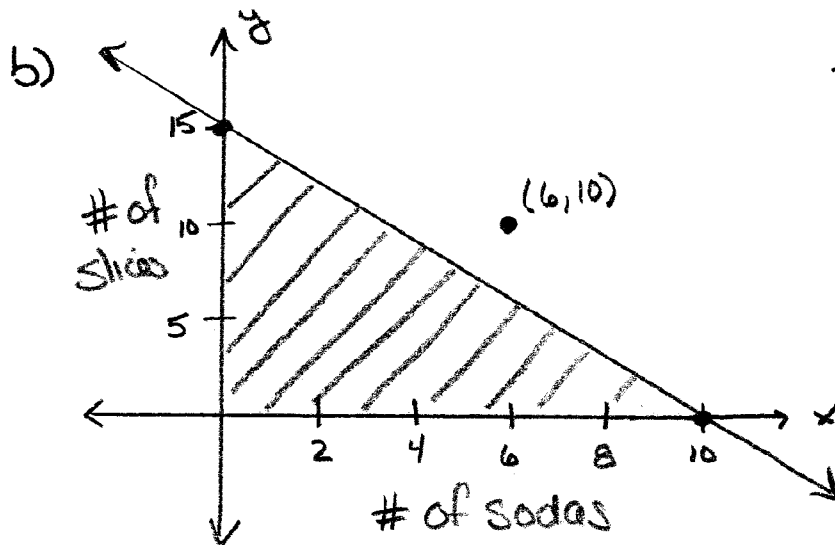


Answers:



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9) a) $3x + 2y \leq 30$



*note: while the shaded region would extend into QII, QIII, & QIV, negative values of x & y would not make sense for the # of sodas/pizza slices. so, only QI should be shaded.

c) NO. if you look at the point (6, 10) where 6 is the # of sodas & 10 is the # of pizza slices, this point is outside of the shaded region. therefore, this point is not a solution to the model.