

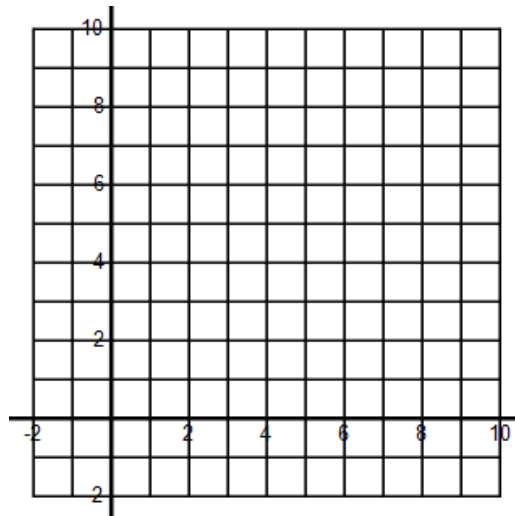
Sec 1H Unit 1 Day 5 – Graphing Linear Inequalities Classwork

You are at the sandwich store. Subs sell for \$5 each. Chips cost \$2 per bag.

1. If you have \$15, what could you buy? List all the possible combinations.

2. Define some variables, then write a rule that would describe the total cost of buying chips and subs with your \$15.

3. Label the axes appropriately, then graph all the possible combinations of chips and subs that you could buy with \$15.

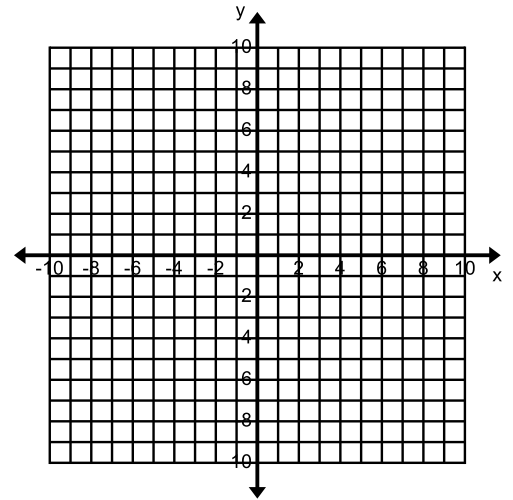


4. Write some observations about your graph, table, and rule:

5. List at least 10 possible combinations of x and y that would make this inequality true: $2x + y \leq 4$

6. Plot all of the combinations from #5 as points (x, y) on this graph:

7. Graph the line $y = -2x + 4$ on the graph also:



8. What do you notice about the relationship between the points from #5 and the line from #7?

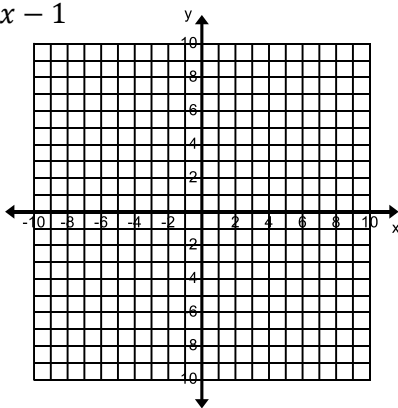
9. What is the relationship between the rule $2x + y \leq 4$ and the line $y = -2x + 4$?

10. When is the boundary line solid?

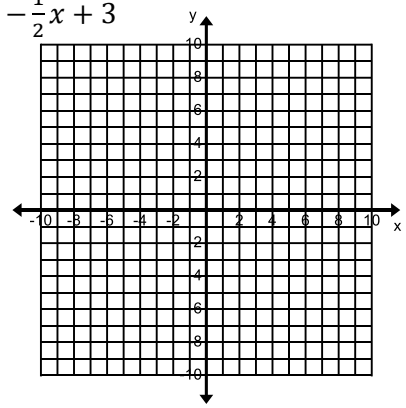
When is the boundary line dotted?

Graph each of the following inequalities. Don't forget to shade the correct section of the graph.

11. $y < x - 1$

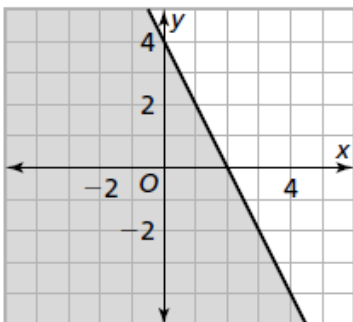


12. $y \geq -\frac{1}{2}x + 3$



For each of the following graphs, write the inequality that has been graphed.

13.



14.

