

SEMESTER REVIEW: Linear Inequalities

Name: _____

Period: _____

Directions: Determine if each point is a solution for the linear inequality. Circle the solutions. **Show all work.**

1. $y > \frac{3}{4}x + 5$

a. (6, -2)

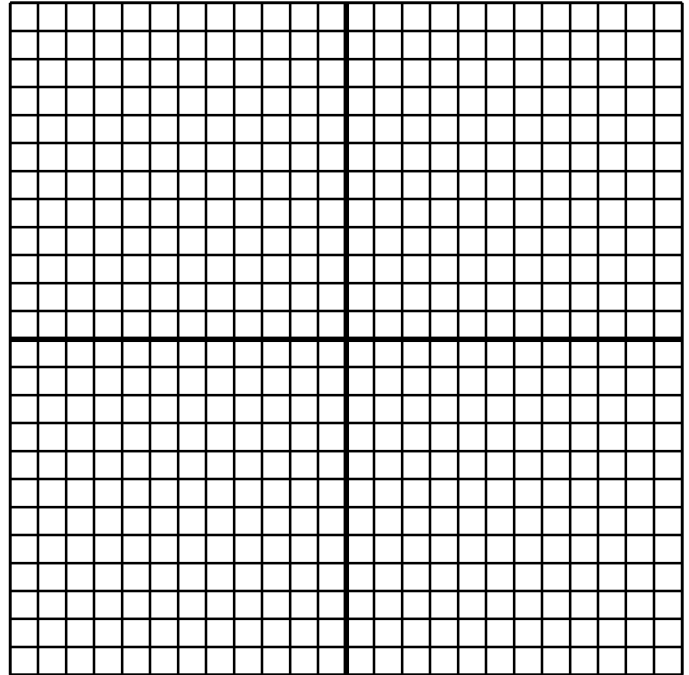
b. (-4, -10)

c. (12, -6)

d. (0, 4)

e. (8, 11)

f. (-12, -2)



2. $4x + 3y \leq 20$

a. (7, -4)

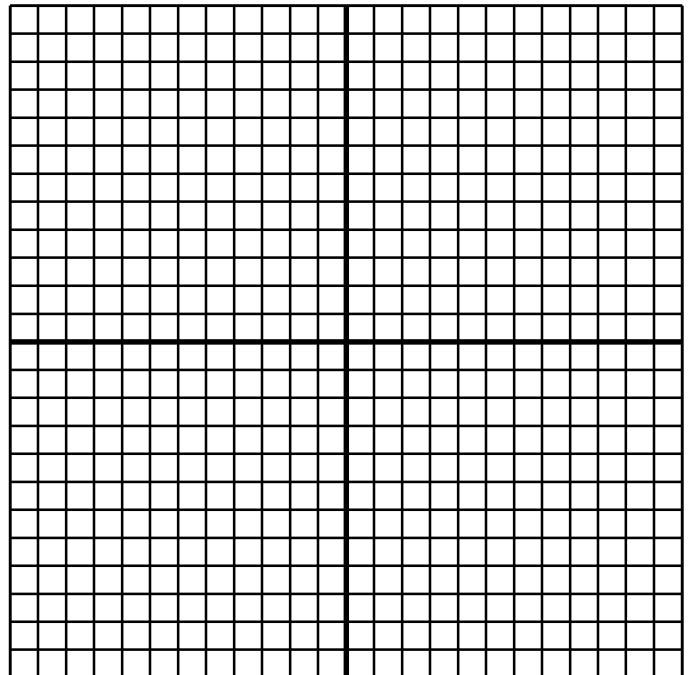
b. (-4, 10)

c. (-8, -2)

d. (6, -3)

e. (5, 0)

f. (-3, 11)



3. $2x - y < 12$

a. $(-2, -14)$

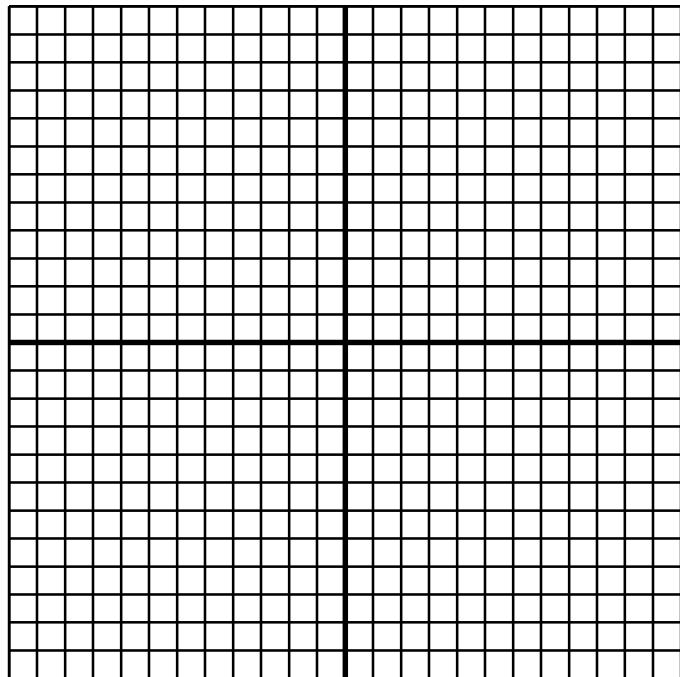
b. $(6, 6)$

c. $(5, -2)$

d. $(10, 6)$

e. $(-3, 8)$

f. $(7, 0)$



4. $y \leq -\frac{5}{2}x - 4$

a. $(6, -10)$

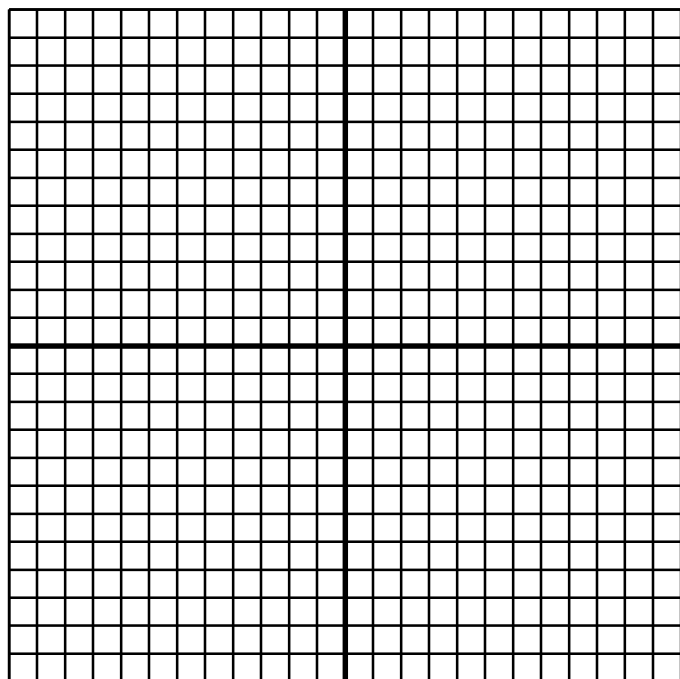
b. $(-8, 16)$

c. $(0, -1)$

d. $(2, -12)$

e. $(-5, -16)$

f. $(-9, -30)$



5. Roger is at a school carnival and decides to play the Grocery Game. To play the Grocery Game, Roger picks 1 grocery item from 6 items without knowing the prices. Then he buys an amount of the item so that the price falls between \$45 and \$50. If the items fall between the 2 prices, he wins a prize. If not, he loses. Roger picks a jar of pasta sauce and buys 18 jars.

a. Write a compound inequality to find the range of prices for Roger to win.

b. Solve the compound inequality. **Round all long decimals to the hundredths place.**

c. Graph the solutions in part b (above) on the number line.



6. Haili decides to play the Grocery Game. To play the Grocery Game, Haili picks 1 grocery item from 6 items without knowing the prices. Then she buys an amount of the item so that the price falls between \$45 and \$50. If the items fall between the 2 prices, she wins a prize. If not, she loses.

Haili picks a bag of frozen vegetables and buys 24 bags.

a. Write a compound inequality to find the range of prices for Haili to winner.

b. Solve the compound inequality. **Round all long decimals to the hundredths place.**

c. Graph the solutions in part b (above) on the number line.



7. Now Mary wants to play the Grocery Game. To play the Grocery Game, Mary picks 1 grocery item from 6 items without knowing the prices. Then she buys an amount of the item so that the price falls between \$45 and \$50. If the items fall between the 2 prices, she wins a prize. If not, she loses.

Mary picks a package of cookies and buys 30 packages.

a. Write a compound inequality to find the range of prices for Mary to win.

b. Solve the compound inequality. **Round all long decimals to the hundredths place.**

c. Graph the solutions in part b (above) on the number line.



8. Murphy wants to try the Grocery Game. To play the Grocery Game, Murphy picks 1 grocery item from 6 items without knowing the prices. Then he buys an amount of the item so that the price falls between \$45 and \$50. If the items fall between the 2 prices, he wins a prize. If not, he loses.

Murphy picks a box of cereal and buys 15 boxes.

a. Write a compound inequality to find the range of prices for Murphy to win.

b. Solve the compound inequality. **Round all long decimals to the hundredths place.**

c. Graph the solutions in part b (above) on the number line.

