

## Linear Inequalities, continued

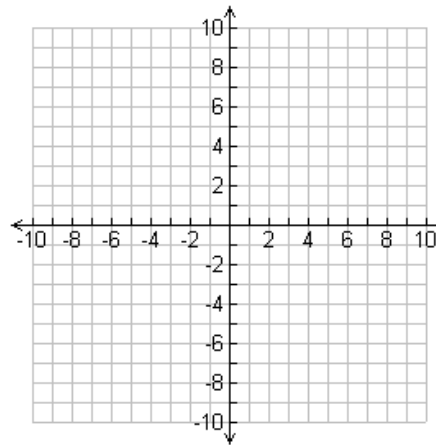
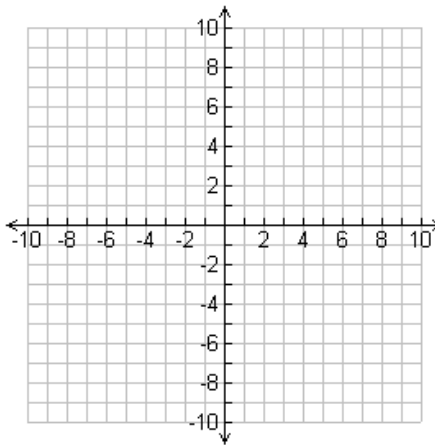
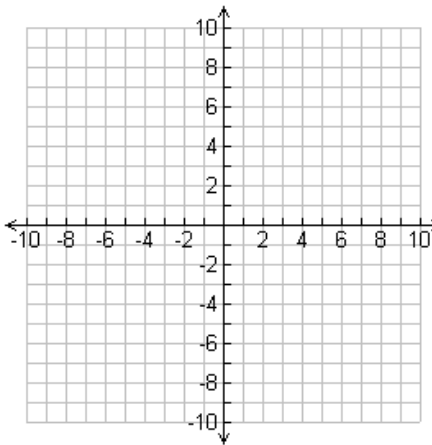
1) Is the ordered pair (3, -8) a solution to the inequality  $y \geq -x - 5$ ?

**YOU MUST SOLVE FOR Y BEFORE SHADING!!!!**

2) Graph:  $6x - 4y \geq 10$

3) Graph:  $-2y > 3x + 6$

4)  $y < -\frac{1}{5}x + 5$



5) Adam is ordering helium balloons for his sister's birthday. He has up to \$15 to spend. Decorative balloons cost \$3.00 each and solid colored balloons cost \$0.50 each.

**Let  $x$  be the number of decorative balloons and  $y$  be the number of solid colored balloons that he buys.**

a. Write an inequality to describe the situation.

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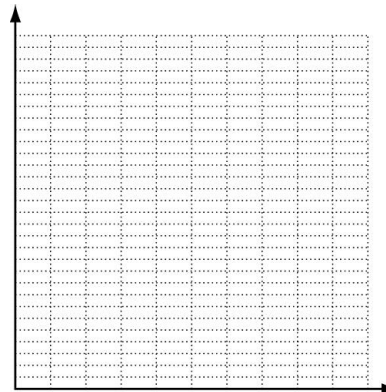
b. Graph the solutions.

c. Give two possible combinations of decorative and solid colored balloons Adam can order.

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d. What does the x intercept represent?

e. What does the y intercept represent?



6) The royalties for the high school play are \$250. Tickets to the play cost \$5 for students and \$8 for nonstudents. Write a linear inequality to describe the number of student and nonstudent tickets that need to be sold so that the drama class can pay the royalties?

***Define each of your variables.***

7) Trey is buying peach and blueberry yogurt cups. He will buy at most 8 cups of yogurt. Let  $x$  be the number of peach yogurt cups and  $y$  be the number of blueberry yogurt cups he buys.

a. Write an inequality to describe the situation.

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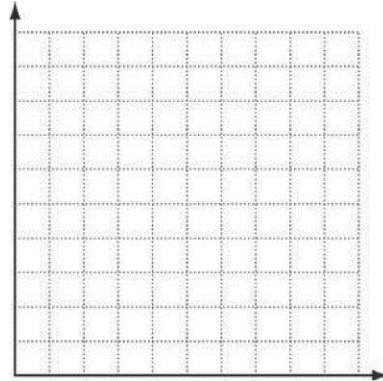
b. Graph the solutions.

c. Give two possible combinations of peach and blueberry yogurt that Trey can choose.

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d. What does the x intercept represent?

e. What does the y intercept represent?



10) Why does the graph of  $y \geq x$  contain a solid line while the graph of  $y > x$  contains a dotted line?

11) A froyo shop wants to have at least 100 gallons of froyo in stock. The table shows the current inventory. Write an inequality that represents the numbers of gallons of vanilla and chocolate that have to be in stock.

Flavor	Gallons
Cake Batter	20
Chocolate	$x$
Cookies & Cream	35
Red Velvet	17
Vanilla	$y$

12) Ramona has \$18 that she can spend on food for her dog. Dry dog food costs \$5.50 per small bag and wet dog food costs \$2.00 per can.

a. Write a linear inequality that describes how many bags and cans of dog food Ramona can buy.

**Define your variables**

b. Can Ramona buy 3 bags of dry dog food and 5 bags of wet dog food? Explain your answer.