

**Graphing Two Variable Inequalities**

**Day 1 Homework**

Name KEY  
 Date \_\_\_\_\_ Period \_\_\_\_\_

1. Clark is having a party at his house. His father has allowed him to spend at most \$20 on snack food. He'd like to buy chips that cost \$4 per bag, and pretzels that cost \$2 per bag.

c: chips  
 p: pretzels

a. Write an inequality to describe the situation

$$4c + 2p \leq 20$$

$$y = mx + b$$

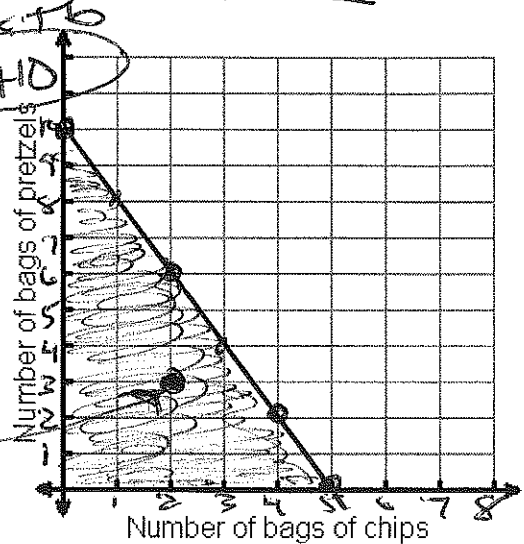
$$p \leq -2c + 10$$

b. Graph the solutions. (c, p)

(0, 10) (5, 0) (2, 6) (4, 2)

c. Give two possible combinations of bags of chips and pretzels that Clark can buy.

(1, 8) (3, 4) (2, 3)



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Tell whether the ordered pair is a solution of the given inequality.

2. (1, 6);  $y < x + 6$

(x, y)  $6 < 1 + 6$   
 $6 < 7$   
 true

3. (-3, -12);  $y \geq 2x - 5$

$-12 \geq 2(-3) - 5$   
 $-12 \geq -6 - 5$   
 $-12 \geq -11$   
 false

4. (5, -3);  $y \leq -x + 2$

$-3 \leq -(5) + 2$   
 $-3 \leq -3$   
 true

5. Kent is ordering helium balloons for Lois. He has up to \$15 to spend. Superman balloons cost \$3.00 each and Batman balloons cost \$0.50 each.

a. Write an inequality to describe the situation.

S: Superman  
 B: Batman  
 $3S + 0.50B \leq 15$

b. Graph the solutions.

c. Give two possible combinations of Superman and Batman balloons Kent can order.

(5, 0) (0, 30) (2, 18)

x-intercept

y-intercept

less than \$15

$B \leq -6S + 30$  slope intercept form

