

Algebra I

Group Members \_\_\_\_\_

Mrs. Graham, the baker, makes corn muffins and bran muffins. Mrs. Graham only has 16 cups of milk available to make muffins, a tray corn muffins require 4 cups of milk and a tray bran muffins require 2 cups of milk. She only has 15 cups of flour available, a tray corn muffins require 3 cups of flour and a tray bran muffins require 3 cups flour. She makes \$3 profit per tray of corm muffins and \$2 profit per try of bran muffins. How many trays of each type of muffin should Mrs. Graham make to maximize profit?

Let x = \_\_\_\_\_ and y = \_\_\_\_\_

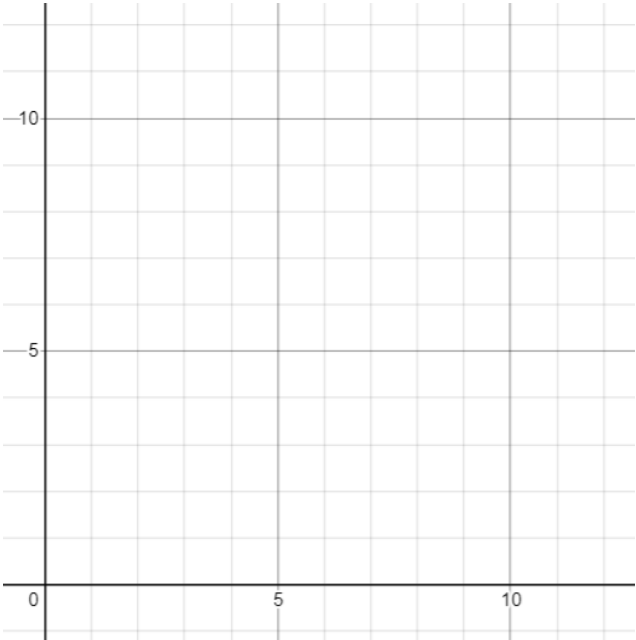
Inequalities:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Profit Function:

\_\_\_\_\_

Profit table:

Vertex	

Mrs. Graham will maximize her profit if she makes \_\_\_\_\_ corn muffins and \_\_\_\_\_ bran muffins.

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Piñatas are made to sell at a craft fair. The craft booth owner has no more than 30 hours available to make piñatas. It takes 2 hours to make a mini piñata and 3 hours to make a regular-sized piñata. The booth owner wants to have no more than 12 piñatas to sell. He will make a profit of \$12 for each mini piñata sold and \$24 for each regular-sized piñata sold. How many of each size piñata should be made to maximize profit?

Let  $x =$  \_\_\_\_\_ and  $y =$  \_\_\_\_\_

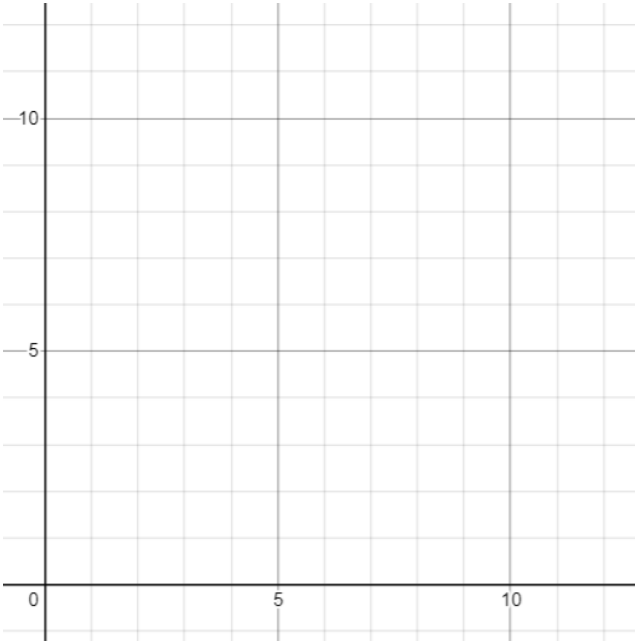
Inequalities:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Profit Function:

\_\_\_\_\_

Profit table:

Vertex	

The craft booth owner will maximize his profit if he makes \_\_\_\_\_ mini piñatas and \_\_\_\_\_ regular sized piñatas.

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Bob the Builder has an eagerness to make picnic tables, you are making two different types a deluxe and a standard. He spend 6 hours building a deluxe and 4 hours building a standard table, but he has at most 48 hours to build. After building he has to finish them, the deluxe takes 1 hour to finish and the standard takes 2 hours to finish, but he has at most 16 hours to finish. The profit of each deluxe tables is \$30, and each standard table is \$36. How many of each should Bob the Builder make to maximize his profit?

Let x = \_\_\_\_\_ and y = \_\_\_\_\_

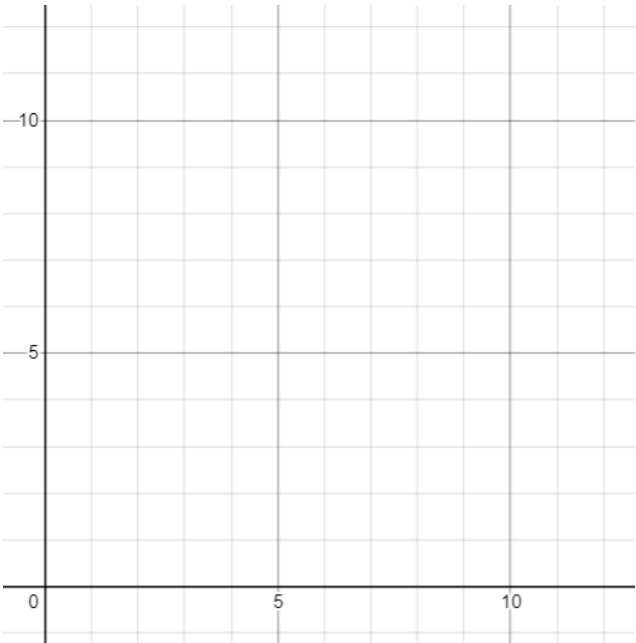
Inequalities:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Profit Function:

\_\_\_\_\_

Profit table:

Vertex	

Bob the Builder will maximize his profit if he makes \_\_\_\_\_ deluxe picnic tables and \_\_\_\_\_ standard picnic tables.

Mr. Jacobs wants to set up a “General Store Booth” before school and sell t-shirts and sweatshirts. It cost \$5 to print a t-shirt and \$15 to print a sweatshirt. He has \$60 to spend on printing. He needs to have no more than 8 times in his booth. He will make a profit of \$7 for each t-shirt sold and \$12 for each sweatshirt sold. How many t-shirts and sweatshirts should he sell to maximize his profit?

Let x = \_\_\_\_\_ and y = \_\_\_\_\_

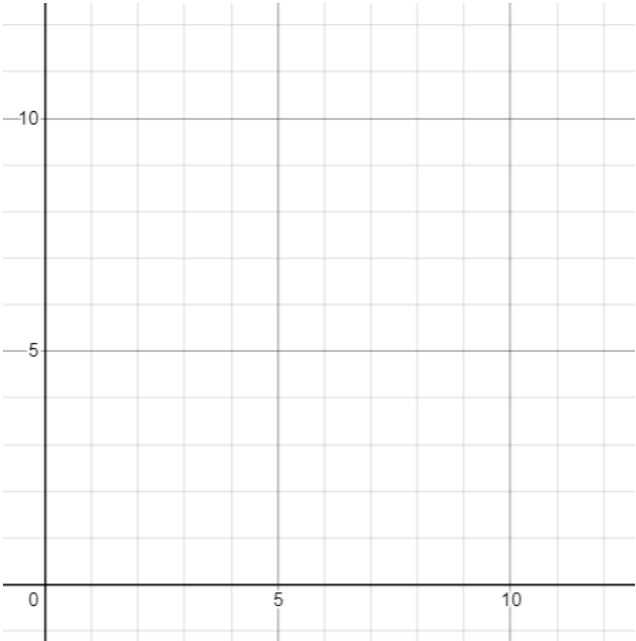
Inequalities:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Profit Function:

\_\_\_\_\_

Profit table:

Vertex	

Mr. Jacobs will maximize his profit if he sells \_\_\_\_\_ t-shirts and \_\_\_\_\_ sweatshirts.