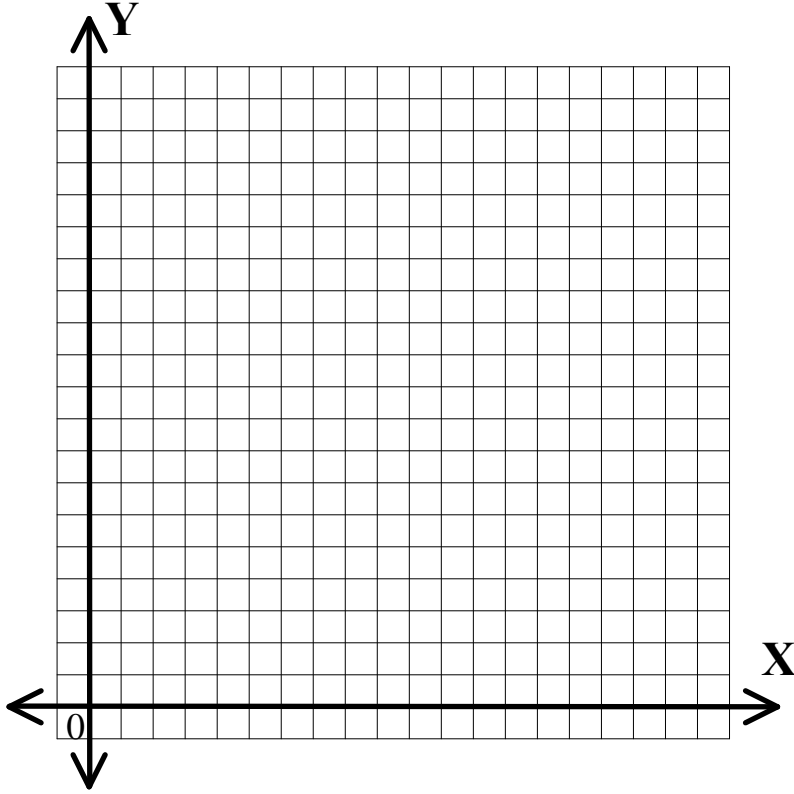


Algebra II Worksheet #6 Unit 4 page 1 _____

Solve the following linear programming problem. Show all of your work neatly organized.

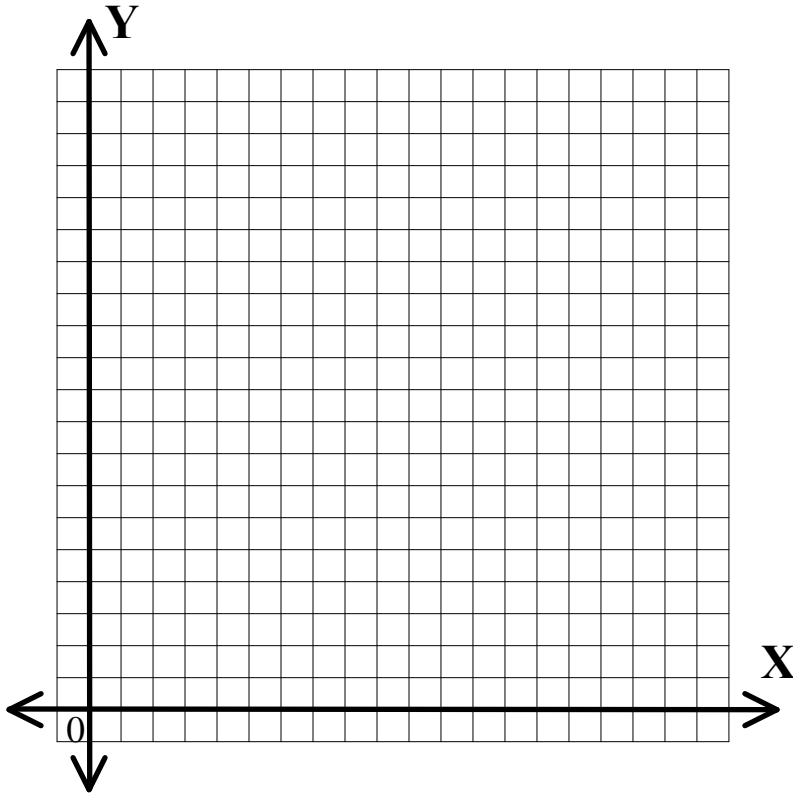
1. A firm manufactures bumpers and fenders for trucks. They can produce a maximum of 120 bumpers per day, and they can produce a maximum of 130 fenders per day. They can only ship a maximum of 230 items (bumpers or fenders) per day. If the profit on each bumper is \$40, and the profit on each fender is \$50, then how many of each item should they produce each day to maximize their profit?



Algebra II Worksheet #6 Unit 4 page 2

Solve the following linear programming problem. Show all of your work neatly organized.

2. Jim Olsen makes and sells gourmet food items. He makes two types of salad dressing, garlic and tofu. Each gallon of garlic dressing requires 2 quarts of oil and 2 quarts of vinegar. Each gallon of tofu dressing requires 3 quarts of oil and 1 quart of vinegar. He has only 18 quarts of oil and 10 quarts of vinegar on hand. He makes a \$3 profit on each gallon of garlic dressing and a \$2 profit on each gallon of tofu dressing. How many gallon of each type should he make in order to maximize his profits?



Algebra II Worksheet #6 Unit 4 page 3

Solve the following linear programming problem. Show all of your work neatly organized.

3. A firm makes whole wheat crackers and sesame crackers, which are sold by the box. Each box contains 5 packets of whole wheat crackers or 3 packets of sesame crackers. The company must produce at least 15 boxes of whole wheat crackers per minute and at least 20 boxes of sesame crackers per minute. The company is unable to produce more than 150 packets of crackers per minute (both types combined). The profit per box of whole wheat crackers is 10 cents, and the profit per box of sesame crackers is 5 cents. How many boxes of each type should be produced per minute in order to maximize profits?

