

1.11 Linear Programming

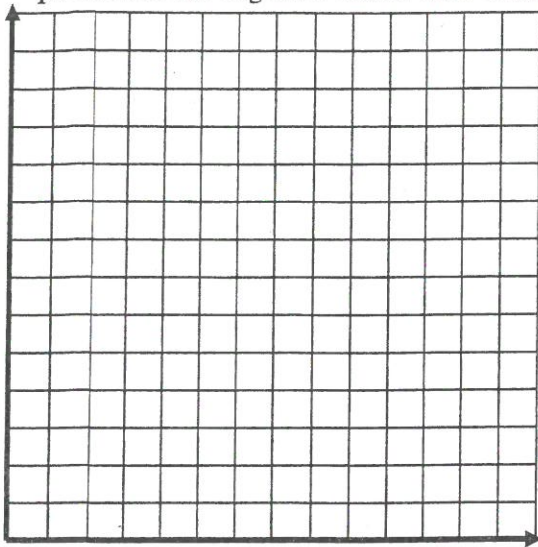
Alg II Linear Programming Worksheet

Name _____

List the inequalities and function needed to answer the problem. Graph the inequalities and list the found vertices. Answer the problem.

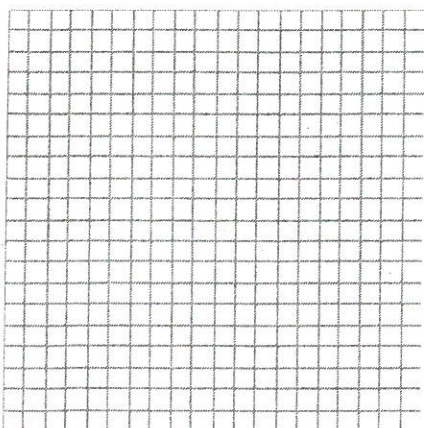
1. A snack bar cooks and sells hamburgers and hot dogs during football games. To stay in business, it must sell at least 10 hamburgers but can not cook more than 40. It must also sell at least 30 hot dogs, but can not cook more than 70. The snack bar can not cook more than 90 items total. The profit on a hamburger is 33 cents, and the profit on a hot dog is 21 cents. How many of each item should it sell to make the maximum profit?

(scale by 10)

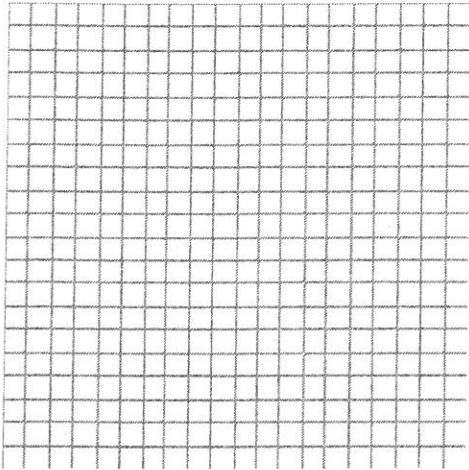


2. A toy manufacturer wants to minimize her cost for producing two lines of toy airplanes. Because of the supply of materials, no more than 40 Flying Bats can be built each day, and no more than 60 Flying Falcons can be built each day. There are enough workers to build at least 70 toy airplanes each day. It costs \$12 to manufacture a Flying Bat and \$8 to build a Flying Falcon. What is the minimum possible cost each day?

(scale by 5)



3. A seafood restaurant owner orders at least 50 fish. He cannot use more than 30 amberjack or more than 35 flounder. Amberjack costs \$4 each and flounder costs \$3 each. How many of each fish should he use to minimize his cost? (scale by 5)



4) You are about to take a test that contains questions of type A worth 4 points and type B worth 7 points. You must answer at least 4 of type A and 3 of type B, but time restricts answering more than 10 of either type. In total, you can answer no more than 18. How many of each type of question must you answer, assuming all of your answers are correct, to maximize your score? What is your maximum score? (scale by 2)

