

OPTIMIZATION 2: LINEAR PROGRAMMING

DESCRIPTION:

This module introduces linear programming and covers multiple methods for solving linear programming problems, including how to use the Microsoft Excel Solver add-in.

Tutorial: 34 slides
Problem Sets: 4 problem sets; 23 questions
Average Time: New Module – No data

Sample question from problem set:

Course: Faculty Access (All Modules in Alphabetical Order)

Module: Optimization 2: Linear Programming / Problem Set ID: 11165

Bill and Sue recently inherited their family farm from their parents and they've decided to continue to manage it together. The farm has **100** acres in total and they have decided that they will grow corn and potato crops on it. To guard against crop failure they've decided to plant a minimum of **25** acres of each crop. They also want to minimize the use of fertilizer and water. Bill declared that they would use no more than **1000** pounds of fertilizer and Sue chimed in that their wells had a maximum capacity of **100,000** gallons per year. From their analysis, they had determined that corn required **15** pounds of fertilizer and **800** gallons of water per year and that potatoes required **8** pounds of fertilizer and **1050** gallons of water per acre. They also had checked local market conditions and they found that the expected revenues of **\$1,600** per acre for corn and **\$750** per acre for potatoes with a normal yield. Fertilizer costs **\$9.08** per pound and water costs **\$0.12** per gallon.

If their objective is to maximize revenues from the farm subject to the constraints, how many acres of corn should they plant?

Problem Sets: 0 / 4 Total Questions: 0 / 23



TUTORIAL  Acres of Corn

PS3 1 2 3 4 5 6

SUBMIT ANSWER

EXIT