

Linear Programming & Linear Regression

Review wksht

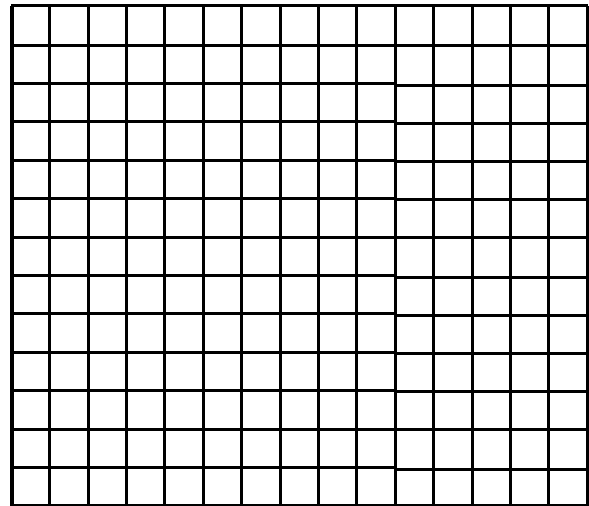
1. A calculator company produces a scientific calculator and a graphing calculator. Long-term projections indicate an expected demand of at least 100 scientific and 80 graphing calculators each day. Because of limitations on production capacity, no more than 200 scientific and 170 graphing calculators can be made daily. To satisfy a shipping contract, a total of at least 200 calculators must be shipped each day.

If each scientific calculator sold results in a \$2 loss, but each graphing calculator produces a \$5 profit, how many of each type should be made daily to maximize net profits?

Let $x =$

$y =$

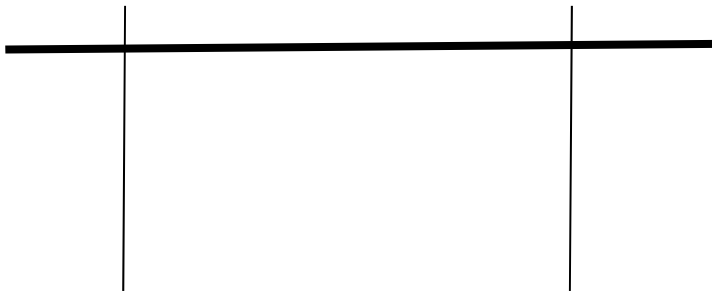
Constraints:



Objective Function: _____

Corner Points for Feasible Region:

Chart:



Conclusion:

2. Five children aged 2, 3, 5, 7 and 8 years old weigh 14, 20, 32, 42 and 44 kilograms respectively. (use x = age and y = weight)

a) Find the equation of the regression line of age on weight (Round to 4 places after the decimal if needed.)

y =_____

b) What is the correlation coefficient for this data? (Round to 4 places after the decimal if needed.)

c) Describe the correlation coefficient (using two words)_____

d) Based on this data, what is the approximate weight to the nearest kg of a six year old child?
