

UNIVERSITY OF MASSACHUSETTS

Isenberg School of Management

Department of Finance and Operations Management

FOMGT 353-Introduction to Management Science

Homework #1 - The Nutty Wood Co.

Show your work completely and in an organized manner to receive maximum credit. Correct answers without supporting calculations or diagrams will not receive credit. Incorrect answers using the correct method and a good presentation will receive substantial credit.

My name is:

The Nutty Wood Co. makes chairs and tables from Walnut and Oak.

A table, which sells for \$400, needs 5 cubic feet of Walnut and 2.5 cubic feet of Oak.

A chair, which takes 2 cubic feet of Oak and 1 cubic foot of Walnut, sells for \$125.

Only 400 cubic feet of Walnut is available and only 250 cubic feet of Oak is available.

Oak costs \$10 a cubic foot and Walnut \$20 a cubic foot.

1. How many cubic feet of Walnut would be needed to produce 6 chairs and a table?

2. How many cubic feet of Oak would be needed to produce 6 chairs and a table?

3. How much would it cost, in materials, to produce 6 chairs and a table?

4. If one table and 6 chairs were sold what would the revenue be?