The Problem
After much nagging from his wife, Mr. Brown has given in to remodeling their kitchen. He goes to Home Depot to purchase the tiles to retile the floor and schedule an appointment for their installation. Write a program that prompts Mr. Brown for the dimensions of his kitchen and those of the tiles that he has selected. Your program should also prompt for the cost of each tile. Home depot provides installation service based on the time that the job will take. A Tile layer is paid at a rate of $100 an hour or part thereof. On average, 50 tiles can be set in an hour. Write a program that Home Depot can use to give the Brown’s an estimate of the cost of the venture. Assume that he only needs to buy the tiles necessary to cover the entire area of the floor. This means that tiles can be cut to fit where necessary. Your program should:

a) Prompt for the dimensions of the room and the tiles and the cost of each tile
b) Compute the cost of the materials
c) Compute the cost of labor
d) Compute the estimated total cost of the venture
e) Prompt the Brown’s for their budget
f) Output if the remodeling is possible with the given budget

Implementation Restrictions
Your program should include the following methods:

getArea – computes and returns the area of a quadrilateral given the length and the width
costOfMaterials – which takes the cost of one tile, computes the number of tiles needed and returns the total cost of the tiles

labourCost – which takes the number of tiles to be laid and using the declared constants of the number of tiles a tile layer can set in an hour and the cost of an hour’s work, returns the cost of labor for the remodeling job. Hint you need to declare two global constants.

checkFeasibility- which takes the budget and estimated cost and prints out if the Brown’s have enough money to make remodeling possible.
Output Sample (User input in bold)
Please enter the room dimensions
15 21
Please Enter the tile dimensions and the cost of each tile
0.5 0.5 1.49

What is your budget?
3000.00

The cost of materials is $1877.40
The cost of labor is $2600.00
The Total cost of the venture is $4477.40
Sorry the job cannot be done because it exceeds your budget