

MATHEMATICAL PROGRAMMING PROBLEMS

Create C# programs to solve the following problems:

1. Find the volume of a rectangular solid when given the length,width and height.
2. A delicatessen sells cold cuts by the pound. Write a program which calculates the customer's bill after accepting the pounds purchased and price per pound.
3. Find the cost of broadloom given the length and width of a room in metres. The cost of the broadloom is \$12 per square metres.
4. Write a program to calculate the percentage markup for any store item, given the cost and the selling price.

$$\text{markup} = (\text{sellingprice} - \text{cost}) \text{ over } (\text{cost}) \text{ TIMES } 100$$

5. Write a program which accepts a salespersons sales for one week and then determines the commission. Commission is 14% of sales.
6. Write a program which accepts an employees name, rate of pay and hours worked. The following values should then be calculated: Gross pay, Taxes (20% of gross pay), and net pay.
7. A vineyard measures the amount of wine in its storage tanks in gallons, but it must ship the wine in barrels. There are 42 gallons in a barrel. Write a program that will accept as input, the number of gallons in the tank, and display using a `MessageBox.Show()` the number of barrels that can be shipped, and the number of gallons remaining after as many barrels as possible have been filled.