* 1. ) Write a program that prompts the user to enter five test scores and then prints the average test score. Indicate the average test score by printing it to the terminal using the following format:

Your average test score is: X

(Assume that the test scores are decimal numbers.)

3.7) Interest on a credit card’s unpaid balance is calculated using the average daily balance.

Suppose that netBalance is the balance shown in the bill, payment is the payment made, d1 is the number of days in the billing cycle, and d2 is the number of days payment is made before billing cycle.

Then, the average daily balance is:

averageDailyBalance = (netBalance \* d1 – payment \* d2) / d1

If the interest rate per month is, say, **0.0152**, then the interest on the unpaid balance is:

interest = averageDailyBalance \* 0.0152

4-6) A box of cookies can hold **24** cookies, and a container can hold **75** boxes of cookies.

Write a program that prompts the user to enter:

* The total number of cookies

The program then outputs:

* The number of boxes and the number of containers to ship the cookies.

Note that each box must contain the specified number of cookies, and each container must contain the specified number of boxes. If the last box of cookies contains less than the number of specified cookies, you can discard it and output the number of leftover cookies.

Similarly, if the last container contains less than the number of specified boxes, you can discard it and output the number of leftover boxes.

5-28 (**Apartment problem**) A real estate office handles, say, 50 apartment units. When the rent is, say, $600 per month, all the units are occupied.

However, for each, say, $40 increase in rent, one unit becomes vacant. Moreover, each occupied unit requires an average of $27 per month for maintenance.

How many units should be rented to maximize the profit?

**Instructions**

Write a program that prompts the user to enter:

1. The total number of units.
2. The rent to occupy all the units.
3. Amount to maintain a rented unit.
4. The increase in rent that results in a vacant unit.

The program then outputs:

1. The number of units to be rented to maximize the profit
2. The maximum profit

Since your program handles currency, make sure to use a data type that can store decimals with a decimal precision of 2.

6-14) During the tax season, every Friday, the J&J accounting firm provides assistance to people who prepare their own tax returns. Their charges are as follows:

* If a person has low income (<= 25,000) and the consulting time is less than or equal to 30 minutes, there are no charges; otherwise, the service charges are 40% of the regular hourly rate for the time over 30 minutes.
* For others, if the consulting time is less than or equal to 20 minutes, there are no service charges; otherwise, service charges are 70% of the regular hourly rate for the time over 20 minutes. (For example, suppose that a person has low income and spent 1 hour and 15 minutes, and the hourly rate is $70.00. Then the billing amount is 70.00 X.40 X (45/60) = $21.00.)

**Instructions**

Write a program that prompts the user to enter yearly income, the hourly rate, the total consulting time. The program should output the billing amount. Your program must contain a function that takes as input the hourly rate, the total consulting time, and a value indicating whether the person has low income. The function should return the billing amount. Your program may prompt the user to enter the consulting time in minutes.