**THE ODD ONE?**

CASE\_1: In a village, a farmer who has ‘n’ number of mangoes and wanted to sell all those to a merchant. When the merchant asked him how many mangoes he had, he replied that he was unable to count after 500. However, merchant has suggested her with some hints to find by herself.

If two divides the number of mangoes, there will be one left.

If three divides them, there will be one left.

If four divides them, there will be one left.

If five divides them, there will be one left.

If six divides them, there will be one left.

If seven divides them, there will be one left.

If eight divides them, there will be one left.

If nine divides them, there will be one left.

If ten divides them, there will be one left.

However, if eleven divides them, there will be no mango left.

Can you find the number of mangoes, the mango maker possess?

**CGPA CALCULATION**

Consider a student, Michael who got the result of his last semester. To know about his performance, he just tried to calculate his scores. Help Mani to satisfy his curiosity. Note that there were five theoretical subjects in his last semester and each subject was evaluated for 100. Also, there were 3 practical subjects which were evaluated for 50 marks each. Note that out of the 5 theory subjects, 2 had 2 credits, 2 had 3 credits and 1 had 4 credit. All the practical subjects had 1 credit each.

i. What is the total percentage that he has scored?

ii. GPA of his current semester.

iii. How much score he was behind in maintaining his current CGPA?

iv. In which subject, Mani was conceptually good, such that he got maximum scores in it?

v. Mani was conceptually weak in one subject; he managed to get just pass grade in it. Find that subject.

**PRINCIPAL AMOUNT**

Suppose you want to deposit a certain amount of money into a savings account and then leave it alone to draw interest for the next 10 years. At the end of 10 years, you would like to have Rs.100, 00,000 in the account. How much do you need to deposit today to make that happen? You can use the following formula to find out:

**NOTE:** P=F/(1+r)n

The terms in the formula are as follows:

• P is the amount that you need to deposit today.

• F is the final value that you want in the account. (In this case, F is Rs.100, 00,000.)

• r is the annual interest rate.

• n is the number of years that you plan to let the money sit in the account.

It would be convenient to write a computer program to perform the calculation because then we can experiment with different values for the variables.