

## L6 Applications

### 6.1 Finding unit costs

Consider the following examples:

Example 1: Mr. Murthy wanted to buy 12 kg of potatoes. He went to Friendly Corner Shop and found that 1 kg of potatoes costs Rs. 16. How much would he have to pay for 12 kg of potatoes?

Price of 1kg of potatoes	= Rs. 16
No. of kg Mr. Murthy needs	= 12
Price of 12 kg of potatoes	= Rs. 16 x 12
	= Rs. 192

This example is like many you have solved before. Here you know the information (cost, number, weight of one and you have to find for many)

Example 2: Mr. Murthy wanted to buy 12 kg of potatoes. He went to Convenient Supermarket and found that if he bought in large quantities (greater than 5 kg), the potatoes were priced at Rs. 60 for 5kg. How much would he have to pay for 12 kg of potatoes at this store?

In this case, we are not given the price of 1 kg of potatoes. So first we have to find the unit cost or the price of one kg.

Price of 5 kg of potatoes	=	Rs. 60
Price of 1 kg of potatoes	=	Rs. 60 ÷ 5 = Rs. 12
So, price of 12 kg of potatoes	=	Rs 12 x 12 = Rs 144.

Example 3: Mr. Murthy has Rs. 10. He wants to buy peppermints with that money. He goes to the Friendly Corner Shop and found that 12 peppermints cost Rs. 6. How many peppermints will he get with Rs. 10? How many will he get if he had Rs 15?

This problem is a bit different from the previous ones.

Instead of asking for the cost of some amount of peppermints you are asked for the number of peppermints for a certain cost (Rs. 10).

Here we first need to know how many peppermints we can get for Re. 1. Then we can find out how many for Rs 10 or Rs. 15.

For Rs. 6 we get 12 peppermints.

For Rs. 1 we get  $12 \div 6 = 2$  peppermints (Total cost of peppermints divided by number of peppermints)

For Re. 1 we get 2 peppermints

Hence for Rs. 10 we get  $2 \times 10 = 20$  peppermints

and for

Rs. 15 we get  $2 \times 15 = 30$  peppermints

6.1.1 Solve the following with proper statements. Show all the working in a separate column.

- a. There are 6816 pencils in 12 boxes. How many pencils are there in each box.
- b. A farmer had 450 saplings to plant. He planted the saplings in 14 rows. How many saplings did he plant in each row? Were there any saplings left over? If so, how many?
- c. The product of 2 numbers is 4860. If one number is 27, find the other.
- d. Mohan had Rs. 549. he bought notebooks with that money. If each notebook costs Rs. 18. How many notebooks did he buy? Did he have any money left over? If so how much?
- e. Atta comes in two types of packages. The 5 kg packet costs Rs.113 and the 2 kg package costs Rs. 51. Which package is a better buy? (You can do this using approximation).
- f. Write the greatest number of 6 digits and divide it by 41.
- g. Mrs. Shah baked 300 cookies and put them in bags for a bake sale. She put 6 cookies in a bag. After the bake sale there were 3 bags left. How many bags of Mrs. Shah's cookies were sold?
- h. *A monthly bus pass from Banashankari to Shivajinagar costs Rs. 432. If you don't have a bus pass, you pay Rs. 24 for a round trip ticket between Banashankari and Shivajinagar*
  - i. *Mrs. Murthy works from Monday, Tuesday and Wednesday. She lives in Banashankari, and works in Shivajinagar. Is it cheaper for her to buy a pass or to pay each day? By how much is it cheaper?*
  - ii. *Mr. Bharathi works from Monday to Friday. She lives in Shivajinagar and works in Banashankari. Is it cheaper for her to buy a pass or to pay each day? By how much is it cheaper?*
  - iii. *Suppose Mrs. Bharathi also goes to the market in Banashankari every Saturday. Is it cheaper for her to buy a pass or to pay each day? By how much is it cheaper? (Assume 1 month is approximately 4 weeks)*

**End of L6**