

15/15/2022

CLASS - IV

CHAPTER - 14

UNITARY METHOD

A single object or person is known as a unit. The word unitary is derived from the word "unit", where the meaning of 'unit' is one. In this chapter, we will use the unitary method to find the value of many, given the value of one and vice versa.

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Ex - 14.1

2.a) 4 toy guns cost ₹ 48. How much would 5 toy guns cost?

$$\begin{aligned} \Rightarrow \text{Cost of 4 toy guns} &= ₹ 48 \\ \text{Cost of 1 toy gun} &= ₹ \left(\frac{48}{4}\right) \\ \therefore \text{Cost of 5 toy guns} &= ₹ \left(\frac{48}{4} \times 5\right) \\ &= ₹ (12 \times 5) \\ &= ₹ 60 \end{aligned}$$

Ans. Cost of 5 toy guns is ₹ 60.

2.(b) A matchbox has 52 matchsticks. How many matchsticks will 4 matchboxes have?

$$\begin{aligned} \Rightarrow \text{Number of matchsticks in 1 matchbox} &= 52 \\ \therefore \text{Number of matchsticks in 4 matchboxes} &= 4 \times 52 \\ &= 208 \end{aligned}$$

Ans. 208 matchsticks will be there in 4 matchboxes.

2(c) 2 schoolbuses can seat 110 students in all. How many students can be seated in 6 such buses?

$$\begin{aligned} \Rightarrow \cdot \text{Number of students can be seated in 2 buses} &= 110 \\ \text{Number of students can be seated in 1 bus} &= \frac{110}{2} \\ \therefore \text{Number of students can be seated in 6 buses} &= \frac{110}{2} \times 6 \\ &= 55 \times 6 \\ &= 330 \end{aligned}$$

Ans. 330 students can be seated in 6 buses.

2(d) 7 kg of rice costs ₹ 98. How much would 15 kg of rice cost?

$$\begin{aligned} \Rightarrow \text{Cost of 7 kg of rice} &= ₹ 98 \\ \text{Cost of 1 kg of rice} &= ₹ \frac{98}{7} \\ \therefore \text{Cost of 15 kg of rice} &= ₹ \left(\frac{98}{7} \times 15 \right) \\ &= ₹ (14 \times 15) \\ &= ₹ 210 \end{aligned}$$

Ans. ₹ 210 is the cost of 15 kg of rice.

2.e) A weaving mill produces 448 saris in 8 days. How many saris will it produce in 15 days?

$$\begin{aligned}\Rightarrow \text{Number of saris produced in 8 days} &= 448 \\ \text{Number of saris produced in 1 day} &= \frac{448}{8} \\ \therefore \text{Number of saris produced in 15 days} &= \left(\frac{448}{8} \times 15 \right) \\ &= (56 \times 15) \\ &= 840\end{aligned}$$

Ans. 840 saris will be produced in 15 days.

2.f) 36 boxes of crayons have 864 crayons in all. How many crayons are there in each box?

$$\begin{aligned}\Rightarrow \text{Number of crayons in 36 boxes} &= 864 \\ \therefore \text{Number of crayons in 1 box} &= \frac{864}{36} \\ &= \frac{\cancel{864}^{144}}{\cancel{36}_6} \\ &= \frac{144}{6} \quad 24 \\ &= 24\end{aligned}$$

Ans. 24 crayons are there in each box.

2g) 10 toys cost ₹ 500. How much would 17 toys cost?

$$\begin{aligned}\Rightarrow \text{Cost of 10 toys} &= ₹ 500 \\ \text{Cost of 1 toy} &= ₹ \left(\frac{500}{10} \right) \\ \therefore \text{Cost of 17 toys} &= ₹ \left(\frac{500}{10} \times 17 \right) \\ &= ₹ (50 \times 17) \\ &= ₹ 850\end{aligned}$$

Ans. ₹ 850 is the cost of 17 toys.

Revision Exercise

1c) 1 teddy-bear costs ₹ 32, so 3 teddy-bears will cost ??

$$\begin{aligned} \Rightarrow \text{Cost of 1 teddy-bear} &= ₹ 32 \\ \therefore \text{Cost of 3 teddy-bears} &= ₹ (32 \times 3) \\ &= ₹ 96 \end{aligned}$$

Ans. ₹ 96 is the cost of 3 teddy-bears.

1h) 3 drums of water have 210L, so 1 drum of water will have ??

$$\begin{aligned} \Rightarrow \text{Quantity of water in 3 drums} &= 210L \\ \therefore \text{Quantity of water in 1 drum} &= \left(\frac{210}{3}\right)L \\ &= 70L \end{aligned}$$

Ans. 70L of water will be there in 1 drum.

1.j) 8 bangles cost ₹ 96, so 1 bangle will cost ??

$$\begin{aligned} \Rightarrow \text{Cost of 8 bangles} &= ₹ 96 \\ \therefore \text{Cost of 1 bangles} &= ₹ \left(\frac{96}{8}\right) \\ &= ₹ 12 \end{aligned}$$

Ans - ₹ 12 is the cost of 1 bangle.

2b) A farmer tills 3 acres of land in 6 days. How many days will he take to till his entire field of 18 acres?

$$\begin{aligned} \Rightarrow \text{Number of days required to till 3 acres of land} &= 6 \\ \text{Number of days required to till 1 acre of land} &= \frac{6}{3} \\ \therefore \text{Number of days required to till 18 acres of land} &= \left(\frac{6}{3} \times 18\right) \\ &= 2 \times 18 \\ &= 36 \end{aligned}$$

Ans - 36 days will be required to till 18 acres of land

Dear class IV students,

All of you practice Ch. No. 6, 7, 8, 9, 10, 11, 12, 14 in your Puja vacation.

Wish you all a very Happy and Safe PUJA!!

- (13) 15/10/2020