



STEPPING STONE  
SCHOOL (HIGH)

**CLASS: 7**

**Subject: Mathematics**

**Date: 08/06/2020.**

**Topic: Proportion & Unitary Method**

**Time Limit: 30 min.**

***Worksheet No. :14***

*[Copy the questions and solve them on a sheet of paper date wise. Keep the worksheets ready in a file to be submitted on the opening day.]*

**Unitary Method**- A method in which the value of a unit quantity is firstly calculated to find the value of required quantity, is called **unitary method**

In unitary method, we generally follow the rules:

- i. To get more, we multiply.
- ii. To get less, we divide.

**Illustrative Example**

Q1. The cost of 12 pens is Rs 84. find the cost of 5 such pens.

Solution. Cost of 12 pens = Rs 84

$$\text{Cost of 1 pen} = \text{Rs } \frac{84}{12} = \text{Rs } 7$$

∴ Cost of 5 pens = Rs 7 X 5 = Rs 35.

Q2 The weight of 12 sheets of paper is 84 grams. How many sheets of the same paper would weight  $3\frac{1}{2}$  kg?

Solution. Since, 84 grams of paper contain = 12 sheets

∴ 1 gram of paper will contain =  $\frac{12}{84}$  sheets

So,  $3\frac{1}{2}$  kg i.e, 3500 grams of paper will contain =  $\frac{12}{84} \times 3500$  sheets

= 500 sheets.

### Questions for practice

Q1. Find "x" in the following proportions:

i.  $x : 4 = 9 : 12$

ii.  $\frac{1}{13} : x :: \frac{1}{2} : \frac{1}{5}$

iii.  $3.6 : 0.4 = x : 0.5$

Q2. Find the fourth proportion:

i. 42, 12, 7

ii.  $\frac{1}{13}, \frac{1}{4}, \frac{1}{5}$

iii. 3kg, 12kg, 15kg [Hint:  $d = \frac{b \times c}{a}$ ]

Q3. The ratio between the length and width of a rectangular sheet of paper is 7 : 5. If the width of the sheet is 20.5 cm, find its length.

Q4. 9 chairs can be bought for Rs 1548. How many chairs can be bought for Rs 4300.

Q5. If cost of 30 shirts is Rs 3765. How many shirts can be had with Rs 2886.50?

Q6. Rahul type 2520 words in 1 hour. How many words he type in one minute?

Q7. If 10 men can do a piece of work in 12 days, how long will 4 men take?

Q8. If 7 men can do a piece of work in 9 days, how long would 21 men take to do it?

Q9. If 36 men can do a piece of work in 25 days. In how many days will 15 men do it?

Q10. A car runs 513 km on 18 litres of diesel. How many kilometres can it run on 34 litres of diesel?

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[Click here for you tube video on unitary method](#)