

Ch-7

UNITARY METHOD

1. 1200 scooters are manufactured in 16 days
 $\therefore$ In 1 day number of scooters manufactured = $1200 \div 16$
 $= 75$ scooters

2.

cycle	days
2500	20
?	1 month (30 days)

In 20 days number of cycle produced = 2500

In 1 day " " " " = $\frac{2500}{20}$

In 30 days " " " " = $\frac{125}{20} \times 30$
 $= 125 \times 30$
 $= 3750$ cycles

- 5)

Students	Rice
150	2700 kg
100	?

150 students consume 2700 kg rice

1 student " = $\frac{2700}{150}$

100 students " = $\frac{2700}{150} \times 100$

$= 90 \times 20$

$= 1800$ kg rice

8) Time Amount
 1 year (12 months) ₹ 21600
 8 ?

$$12 \text{ months rent} = ₹ 21600$$

$$1 \text{ month rent} = \frac{21600}{12}$$

$$8 \text{ months rent} = \frac{21600}{12} \times 8 = ₹ 14400$$

9 Quantity Days
 37.5 l 15
 ? 1 week (7 days)

$$\text{In 15 days milk bought} = 37.5 \text{ l}$$

$$\text{In 1 day " " " " } = \frac{37.5}{15} = 2.5$$

$$\therefore \text{In 7 days " " " " } = \frac{37.5}{15} \times 7 = 2.5 \times 7 = 17.5 \text{ l}$$

11 cloth shirts
 9 m 5
 ? 4

5 shirt is made from 9 m cloth

$$1 \text{ " " " " } = \frac{9}{5} \text{ m "}$$

$$4 \text{ " " " " } = \frac{9}{5} \times 4 \text{ m} = \frac{36}{5} = 7.2 \text{ m cloth.}$$

12 Times Min
 360 5 min.
 ? Half-an-hour (30 min)

$$\text{In 5 min the heart beats } 360 \text{ times}$$

$$\text{In 1 min " " " " } = \frac{360}{5}$$

$$\text{In 30 min " " " " } = \frac{360}{5} \times 6 = 360 \times 6 = 2160 \text{ times.}$$

Ex-7 (B)
 1 1 man does a work in 36 days.
 $\therefore$ 9 man do the same work in $\frac{36}{9} = 4$ days.

2 In 30 days a field is ploughed by 25 men.
 $\therefore$ In 1 day " " " " " by = 25×30
 $= 750$ men.

4

Men	Days
48	75
?	60

75 days is needed to build the building by 48 men
 1 day " " " " " " by 48×75 men
 60 days " " " " " " by = $\frac{48 \times 75}{60}$
 $= 12 \times 5$
 $= 60$ men.

6

Taps	Time
8	20 min
10	?

8 taps can fill a tank in 20 min.
 1 tap " " " " " in 20×8 min
 10 taps " " " " " " $\frac{20 \times 8}{10} = 2 \times 8$
 $= 16$ min

10

Cows	Days
45	18
30	?

45 cows can graze a field in 18 days
 1 cow " " " " " in 18×45 days
 30 cows " " " " " " = $\frac{18 \times 45}{30}$
 $= 9 \times 3$
 $= 27$ days

11 Students Days
 50 1 month (30 days)

50 + 10 = 60 ?

50 students has provision for 30 days.

1 student have " " " 30 x 50 days.

60 " " " " " $\frac{30 \times 50}{60} = 25 \text{ days}$

12 Men Days
 112 72
 ? 48

72 days is required to build a tunnel by 112 men

1 day " " " " " " " = 112 x 72

48 days " " " " " " " = $\frac{112 \times 72}{48}$

= 7 x 24

= 168 men

∴ Number of more men required = 168 - 112

= 56 more men

Chapter - 8
Ex - 8(A)

class - V

2 a) 3646 to get a number divisible
by 3 i) 1 ii) 2

$$\begin{array}{r} 1215 \\ 3 \overline{) 3646} \\ \underline{3} \\ 6 \\ \underline{6} \\ 4 \\ \underline{3} \\ 16 \\ \underline{15} \\ 1 \\ \underline{1} \\ 0 \end{array}$$

Subtracted = 1
Added = 3-1=2

d) 7427 to get a number divisible
by 6 i) 5 ii) 1

$$\begin{array}{r} 1237 \\ 6 \overline{) 7427} \\ \underline{6} \\ 14 \\ \underline{12} \\ 22 \\ \underline{18} \\ 47 \\ \underline{42} \\ 5 \\ \underline{5} \\ 0 \end{array}$$

Subtracted = 5
Added = 6-5=1

f) 26,303 to get a number divisible by
11 → i) 2 ii) 9

$$\begin{array}{r} 2391 \\ 11 \overline{) 26303} \\ \underline{22} \\ 43 \\ \underline{33} \\ 100 \\ \underline{99} \\ 13 \\ \underline{11} \\ 2 \\ \underline{2} \\ 0 \end{array}$$

Subtracted = 2
Added = 11-2=9

3) a) 8; 1008 = Yes, the first number is a factor of the second number.

$$\begin{array}{r} 126 \\ 8 \overline{) 1008} \\ \underline{8} \\ 20 \\ \underline{16} \\ 48 \\ \underline{48} \\ \hline \text{xx} \end{array}$$

c) 9; 3145 = No, not a factor.

$$\begin{array}{r} 349 \\ 9 \overline{) 3145} \\ \underline{27} \\ 44 \\ \underline{36} \\ 85 \\ \underline{81} \\ 4 \end{array}$$

e) 19; 626 = No, not a factor.

$$\begin{array}{r} 32 \\ 19 \overline{) 626} \\ \underline{57} \\ 56 \\ \underline{38} \\ 18 \end{array}$$

h) 12; 780 = Yes, it is a factor.

$$\begin{array}{r} 65 \\ 12 \overline{) 780} \\ \underline{72} \\ 60 \\ \underline{60} \\ \hline \text{xx} \end{array}$$

4) List the factors:-

a) $48 \rightarrow 1, 2, 3, 4, 6, 8, 12, 16, 24, 48$.

$$1 \times 48 = 48$$

$$2 \times 24 = 48$$

$$3 \times 16 = 48$$

$$4 \times 12 = 48$$

$$6 \times 8 = 48$$

(OK)

$$\begin{array}{r} 48 \\ 1 \overline{) 48} \\ \underline{48} \\ 0 \end{array}$$

$$\begin{array}{r} 24 \\ 2 \overline{) 48} \\ \underline{48} \\ 0 \end{array}$$

$$\begin{array}{r} 16 \\ 3 \overline{) 48} \\ \underline{48} \\ 0 \end{array}$$

$$\begin{array}{r} 12 \\ 4 \overline{) 48} \\ \underline{48} \\ 0 \end{array}$$

$$\begin{array}{r} 8 \\ 6 \overline{) 48} \\ \underline{48} \\ 0 \end{array}$$

d) $108 = 1, 2, 3, 4, 6, 9, 12, 18, 27, 36, 54, 108$

$$1 \times 108 = 108$$

$$2 \times 54 = 108$$

$$3 \times 36 = 108$$

$$4 \times 27 = 108$$

$$6 \times 18 = 108$$

$$9 \times 12 = 108$$

f) $169 \rightarrow 1, 13, 169$

$$1 \times 169 = 169$$

$$13 \times 13 = 169$$

h) $150 \rightarrow 1, 2, 3, 5, 6, 10, 15, 25, 30, 50, 75, 150$.

$$1 \times 150 = 150$$

$$2 \times 75 = 150$$

$$3 \times 50 = 150$$

$$5 \times 30 = 150$$

$$6 \times 25 = 150$$

$$10 \times 15 = 150$$

5a) First six multiples of 9 =
= 9, 18, 27, 36, 45, 54.

d) Ninth multiple of 16 = 144
= $9 \times 16 = 144$

e) Multiples of 11 greater than 55 but less than 180 = 66, 77, 88, 99, 110, 121, 132, 143, 154, 165, 176.

$$11 \times 6 = 66$$

$$11 \times 7 = 77$$

$$11 \times 8 = 88$$

$$11 \times 9 = 99$$

$$11 \times 10 = 110$$

$$11 \times 11 = 121$$

$$11 \times 12 = 132$$

$$11 \times 13 = 143$$

$$11 \times 14 = 154$$

$$11 \times 15 = 165$$

$$11 \times 16 = 176$$

11 Prime factors:-

$$i) 27 \rightarrow \underline{3}$$

$$ii) 91 \rightarrow \underline{7, 13}$$

$$iii) 100 \rightarrow \underline{2, 5}$$

$$iv) 143 \rightarrow \underline{11, 13}$$

6) a) Prime numbers between:-
50 to 65 = 53, 59, 61.

c) 110 to 125 = 113.

7) Composite numbers between:-

a) 70 to 80 = 72, 74, 75, 76, 77, 78

c) 40 to 50 = 42, 44, 45, 46, 48, 49

9) The smallest composite number = 4

10) The prime number which is even = 2