Maths

Unit 6 Ex:6.1

$a:b = 3:5$ and $b:c = 5:6$, then find $a:b:c$.

$a : b : c$

$3 : 5$ (×5, ×6)

$5 : 6$

$15 : 25 : 30$

$15_3 : 25_5 : 30_6$

$3 : 5 : 6$

If $r:s = 1:4$ and $s:t = 2:3$, then find $r:s:t$

$a : b : c$ $r:s:t$

$1:4$ (×2, ×3)

$2:3$

$2:8:12$ (÷ by)

$= 1:4:6$

If $p:q = 1:2$ and $q:r = 1:2$ then find $p:q:r$

$p : q : r$

$1 : 2$

$\quad\quad 1 : 2$

$1 : 2 : 4$

If $x:z = 3:2$ and $y:z = 1:2$, then find $x:y:z$

$x : z : y$

$3 : 2$

$\quad\quad 2 : 1$

$6 : 4 : 2$ (÷ by)

$= 3 : 2 : 1$

$= 3 : 1 : 2$

Saturday

Maths:-

Unit 6:- Ex:6.1

Q6 In a bakery..... milk.

bread to egg = 2:3
eggs to milk = 3:1

Bread : eggs : milk
2 : 3 (×) — (×)
(×) 3 : 1 (×)
6 : 9 : 3

Bread : eggs : milk = 2 : 3 : 1

Ahmad ..... Waseem.
Ahamd profit to Irfan = 5:4
Arafam profit to waseem = 8:9

Ahmad : Irfan : Waseem
5 : 4 (×) — (×)
(×) 8 : 9 (×)
40 : 32 : 36

Ahmad : Irfan : Waseem = 10 : 8 : 9

According ..... and beef.
liking chicken to mutton = 2 : 1
liking chicken to beef = 5 : 2

Mutton : Chicken : beef
1 : 2
x 5 x : 2 x
5 : 10 : 4

Chicken : Mutton : beef = 10 : 5 : 4
In a ..... Komal.

Zara to Moona = 4 : 5
Moona to Komal 4 : 3
Zara : Moona : Komal
4 : 5
x 4 x : 3 x
16 : 20 : 15
Zara : Moona : Komal

Maths.

Unit 6 Ex 6:2

Find the value of m in following.

$0.21 : 6.3 = 0.06 : m$

Product of mean = Product of extreme

$6.3 \times 0.06 = 0.21 \times m$

$0.378 = 0.21m$

$m = \frac{0.378}{0.21} \times \frac{100}{100}$

$= \frac{378}{21 \times 10}$

$= \frac{378}{210}$

$= 1.8$ Ans.

$13 : 3 = m : 6$

$13 : 3m : 6$

Product of mean = Product of extreme

$3 \times m = 13 \times 6$

$3m = 78$

$m = \frac{78}{3}^{26}$

$m = 26$

$35 : 21 = 5 : m$

Sol $35 : 21 = 5 : m$

Product of mean = Product of extreme

$21 \times 5 = 35 \times m$

$105 = 35m$

$\frac{105}{35}^{\times 3} = m$

$3 = m$

$m = 3$

$m : 5 = 3 : 10$

Sol $m : 5 = 3 : 10$

Prodct of mean = Product of extreme

$5 \times 3 = m \times 10$

15 $= 10m$

$\frac{15}{10}3 = m$

$\frac{3}{2} = m$

$1.5 = m$ A

$9 : m = 54 : 42$

$= 9 : m = 54 : 42$

Product of mean = Product of extre

$m \times 54 = 9 \times 42$

$54m = 378$

$m = \frac{378}{54}$ 18 8 6 2 7

$m = 7$ A

$1.1 : m = 0.55 : 0.27$

Sol. $= 1.1 : m = 0.55 : 0.27$

Product of mean = Product of extreme

$m \times 0.55 = 1.1 \times 0.27$

$0.55\,m = 0.297$

$m = \frac{0.279}{0.55} \times \frac{1000}{1000}$

$m = \frac{279}{55 \times 10}$

$m = \frac{279}{550}$

$m = 0.5$

2. What is ..... 2, 5 and 6?

$2 : 5 = 6 : x$

Product of mean = Product of extreme

$2 \times x = 5 \times 6$

$2x = 30$

$x = \frac{30}{2}$ 15

$x = 15$

3. Find mean ..... 4 and 16.

Product of mean = Product of extreme

$4 : x = x : 16$

$x^2 = 4 \times 16$

$x^2 = 64$

$x = \sqrt{64}$

$x = 8$ ✓

4 A worker ..... in the month

Direct propotion.

$$\uparrow \frac{2130}{9230} :: \frac{6}{x} \uparrow$$

$$x = \frac{9230 \times 6}{2130} = \frac{5538}{213}$$

$$= 26 \text{ days.}$$

A workers paid 9230 Rs in 26 days

Uzair takes ..... steps?

Step :: distance

$$75 :: 50\,m$$

$$375 :: x$$

$$\frac{375}{75} = \frac{x\,m}{50}$$

$$x = \frac{375}{75} \times 50\,m$$

$$= \frac{1750}{3} = 250$$

If 2 boxes ..... 175 boxes.

Boxes		Space
2 ↑	::	500 ↑
175		x

Direct propotion

$$\frac{175}{2} = \frac{x}{500}$$

$$x = \frac{175 \times 500}{2}$$

$$= 175 \times 200$$

$$= 43750\ cm^3$$

∴ 175 boxes occupy 43750 cm³ space

An army ..... last; if

) The number ..... to 160?

No of men = No of days

200 :: 60

160 20

$$\frac{200}{160} = \frac{x}{60} \Rightarrow \frac{5 \quad 15}{\cancel{200} \times \cancel{60}}{\cancel{160}_{8}} = x$$

$x = 75$ days

160 men has food for 75 days

2) The number ..... 240?

Sol:

No of men :: No of days

200 : 60

240 : x

$= \frac{200}{240} : \frac{60}{x}$

$x = \frac{200 \times 60}{240}$

$x = \frac{1200}{24}$

$x = 50$ day

240 men has food for 50 days

Wednesday

Mathematics

Unit 6

Ex: 6.3

If a man ..... in 14 hours?

Sol:

Cloth (m)	::	Time (hr)
450	::	6
x	::	14

Direct proportion.

$$\frac{x}{450} = \frac{14}{6}$$

$$x = \frac{14}{6} \times 450$$

$$x = \frac{6300}{6}$$

$$x = 1050 \text{ m}$$

Man can weave 1050 m cloth in 14 hr

$$\begin{array}{r} 450 \\ \times\ 14 \\ \hline 1800 \\ 4500 \\ \hline 6300 \end{array}$$

If a 162 km ..... long road?

Sol Length/Long road (km) :: Month

$\uparrow 162 :: 9 \uparrow$

$306 :: x$

Direct proportion

$$\frac{306}{162} = \frac{x}{9}$$

$$x = \frac{306}{162} \times 9$$

$$x = \frac{153}{9}$$

$$x = 17$$

306 km Long road can be constructed in 17 months.

$$9 \overline{)153} \quad 17$$

9

63

63

x

540 men can ..... 9 months?

Sol

Men	::	Months
540	::	7
x	::	9

Inverse proportion.

$$\frac{x}{540} = \frac{7}{9}$$

$$x = \frac{7}{9} \times 540$$

$$x = \frac{3780}{9}$$

$$x = 420$$

Removed men = 540 - 420 = 120.

120 men can construct a building in 9 months.

Asma can ..... 35 shirts.

Shirts	::	Minutes
5	::	14
35	::	x

Direct proportion.

$$\frac{35}{5} = \frac{x}{14}$$

$$x = \frac{35^{7}}{5_{1}} \times 14$$

$$x = 98$$

1 hour = 60 min

98 m − 60 m = 38 min.

98 ÷ 60 = 38 ∴ 1 hour 38 min.

So, Asma can iron 35 shirts in 1 hour and 38 mins.

1
60 | 98
60
38

Sol: 12 water pumps ..... tank empty?

Out of Remaing pumps.

$12 - 2 = 10$

Waters pump :: Minutes

12 :: 20

10 :: x

Inverse proportion

$$\frac{12}{10} = \frac{x}{20}$$

$$x = \frac{12 \times 20}{10}$$

$$x = 24$$

10 water pump can make a water tank empty in 24 minutes.

14 horses ..... graze it?

Sol:

horses	::	Days
14 ↓	::	25 ↑
35	::	x

Inverse proportion

$$\frac{14}{35} = \frac{x}{25}$$

$$x = \frac{14}{35} \times 25$$

$$x = 2 \times 5$$

$$x = 10 \text{ days.}$$

So, 35 horses graze a field in 10 days.

A mason ..... track.

Remaining track = 744 − 589 = 155

Length track	::	Days
744		24
155		x

Direct

$$\frac{155}{744} = \frac{x}{24}$$

$$x = \frac{155}{744} \times 24$$

$$x = 5 \text{ days}$$

A mason can repair 155 m long track in 5 days.

A farmer can ..... 36 hours?

Acres	::	Time (hr)
40	::	16
x	::	36

Direct proportion.

$$\frac{x}{40} = \frac{36}{16}$$

$$x = \frac{36}{16} \times 40$$

$$x = 90$$

A farmer can plough an area of 90 acres in 36 hours

A dish ..... minutes?

Dishes	::	Time
↑ 1350	::	60 = 1 hour ↑
x	::	60 + 16 = 76 ↑

1 hour = 60 min = 60 + 16 = 76

Direct proportion

$$\frac{x}{1350} = \frac{76}{60}$$

$$x = \frac{76}{60} \times 1350$$

$$x = \frac{10260}{6}$$

$$x = 1710$$

A dish washer clean 1710 dishes in 76 min