

11-10-2014

QUANTITATIVE APTITUDERATIOS AND PROPORTIONS

$$A:B :: C:D$$

$$AD = BC$$

$$A:B = \left(\frac{2}{4} : \frac{3}{5} \right)$$

$$B:C = \left(\frac{4}{4} : \frac{5}{5} \right)$$

$$A:B:C = 8:12:15$$

$$A:B = \left(\frac{1}{3} : \frac{2}{4} \right)$$

$$B:C = \left(\frac{3}{5} : \frac{4}{6} \right)$$

$$C:D = \left(\frac{1}{5} : \frac{2}{6} \right)$$

$$A:B:C:D = 15:30:40:45$$

P.9 NO. 61

$$\text{Ex-1. } A:B = 8:15$$

$$B:C = 8:8$$

$$C:D = 4:8$$

$$\frac{A:D}{4:15}$$

$$2. M : F$$

There are 84 males

$$7 : 4$$

$$\rightarrow 11 \times 12 = 132$$

$$M = 84$$

$$1P = 84 \times 12$$

$$1P = 12$$

$$3. P : Q : R$$

$$2 : 3 : 5 \rightarrow 5 \times 100 = 500$$

$$7P > 3P = 400/-$$

$$4P = 400$$

$$1P = 100$$

4.

$$M : P : B$$

$$5 : 7 : 8$$

$$40\% : 50\% : 75\%$$

$$10\% \text{ of } x = \frac{10}{100} \times x = \frac{x}{10}$$

$$10\% \uparrow = x + \frac{x}{10} = \frac{4x}{10}$$

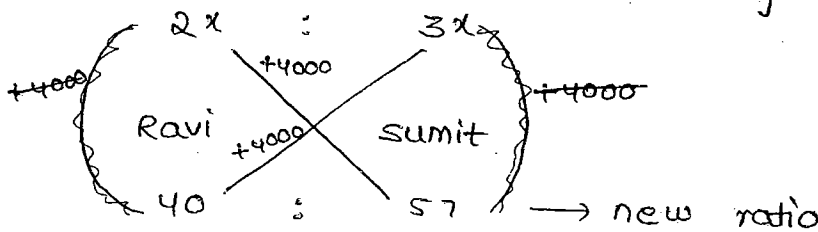
$$\frac{5 \times 140}{100} : \frac{7 \times 150}{100} : \frac{8 \times 175}{100}$$

$$2 : 3 : 4$$

$$10\% \uparrow = \frac{110}{100}$$

5. Ravi Sumit

Salary increased by 4000



$$(2x + 4000)57 = (3x + 4000)40$$

$$x = 21,000$$

∴ None of these.

6.

$$A = \frac{2}{3}B \Rightarrow A:B = \left(\frac{2}{3} : 1\right)$$

$$B = \frac{1}{4}C \Rightarrow B:C = \left(1 : 4\right)$$

$$A:B:C = 2:3:12$$

$$= 2 \times 30 : 3 \times 30 : 12 \times 30$$

$$= 60 : 90 : 360$$

$$17p = 510$$

$$1p = 30$$

7.

$$A : B : C$$

$$3 \quad 4 \quad 5 \leftarrow$$

$$5\% \quad 10\% \quad 15\%$$

↓

$$4 \times 200 = 800$$

$$\begin{array}{r} 10\% + \\ \hline 800 \\ \hline 810 \end{array}$$

$$\begin{array}{r} 2430 \\ 30 \leftarrow \\ \hline 2400 \end{array}$$

$$30\%$$

$$(3+4+5)$$

↓

$$12p = 2400$$

$$1p = 200$$

$$\begin{array}{r} 2700 \\ 60 \\ \hline 45 \end{array}$$

P.9 No:- 62

1. Mixture of 60 lit

$$\Rightarrow \frac{60}{3} = 20 \text{ each part}$$

Milk water

$$2 : 1$$

$$\Rightarrow (2 \times 20) : (1 \times 20)$$

$$40 \text{ lit} : 20 \text{ lit} :: 1 : 2$$

new ratio

$$+x$$

$$(40 \times 2) = (20 + x) \times 1$$

$$x = 60 \text{ lit}$$

$$20 + x$$

$$\begin{array}{r} \text{2. Mixture} = 20 \text{ lit} \\ - 4 \text{ lit} \\ \hline 16 \text{ lit} \end{array}$$

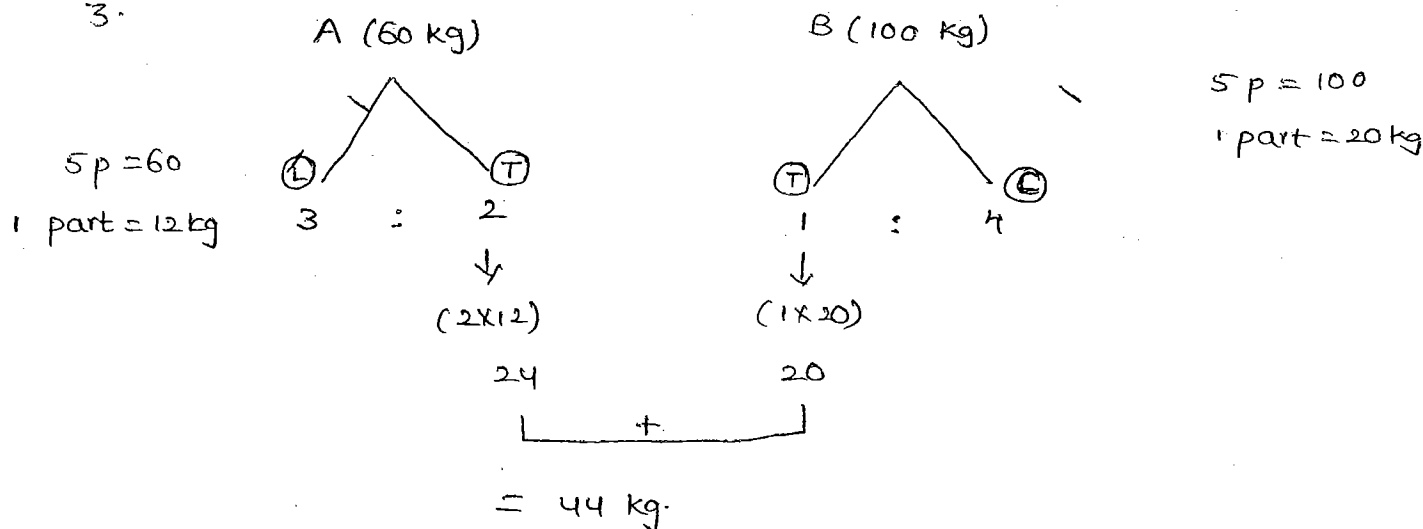
$$5 + 3 = 8 \text{ parts}$$

$$= \frac{16}{8} = 2 \text{ each part}$$

/

$$\begin{array}{l} M : W \\ 5 : 3 \\ \downarrow \\ (5 \times 2) : (3 \times 2) \\ 10 \text{ lit} : 6 \text{ lit} \\ + 4 \\ 14 \text{ lit} : 6 \text{ lit} \\ 7 \text{ lit} : 3 \text{ lit} \end{array}$$

3.



4.

/	B	C
A		
G : C	G : C	G : C
7 : 2	7 : 11	
Total parts = 9	Total parts = 18	
$\frac{7}{9} : \frac{2}{9}$	$\frac{7}{18} : \frac{11}{18}$	$\left(\frac{7}{9} + \frac{7}{18}\right) : \left(\frac{2}{9} + \frac{11}{18}\right)$
(each part)		21 : 15
		7 : 5

$$5. A = B + 7 = x + 8 + 7 = x + 15 = 25$$

$$B = C + 8 = x + 8 = 18$$

$$C = x = 10$$

$$x + 15 + x + 8 + x = 53$$

$$x = 10$$

$$A : B : C$$

$$25 : 18 : 10$$

6. $\frac{25p}{1} : \frac{10p}{2} : \frac{5p}{3}$ $\longrightarrow \frac{15 \times 50}{5} = 150 \text{ NO's.}$

$$60p = 30 \times 100$$

$$1p = 50 \text{ NO's of 1 paise coins}$$

7.

Income

$$A : B$$

$$5 : 4$$

↓

$$5 \times 800$$

$$= 4000/-$$

expenditure

$$A : B$$

$$3 : 2$$

$$2p = 1600$$

$$p = 800$$

$$\text{Saving} = \text{Income} - \text{expenditure}$$