

11-10-2014

QUANTITATIVE APTITUDE

RATIOS AND PROPORTIONS

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

$$AD = BC$$

$$\begin{array}{l} A:B = (2:3) \\ B:C = (4:5) \end{array}$$

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

$$\begin{array}{l} A:B = (1:2) \\ B:C = (3:4) \\ C:D = (5:6) \end{array}$$

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

P-9 NO:-61

Ex:-1. $A:B = 8:15$
 $B:C = 8:8$
 $C:D = 4:8$

$$\begin{array}{l} A:D \\ 4:15 \end{array}$$

2. M : F there are 84 males

$$\begin{array}{l} 7 : 4 \\ \text{---} \rightarrow 11 \times 12 = 132 \\ M = 84 \end{array}$$

$$\begin{array}{l} 7P = 8412 \\ \text{---} \\ 1P = 12 \end{array}$$

3. P : Q : R
 $2 : 3 : 5 \rightarrow 5 \times 100 = 500$

$$\begin{array}{l} 7P > 3P = 400/- \\ 4P = 400 \\ 1P = 100 \end{array}$$

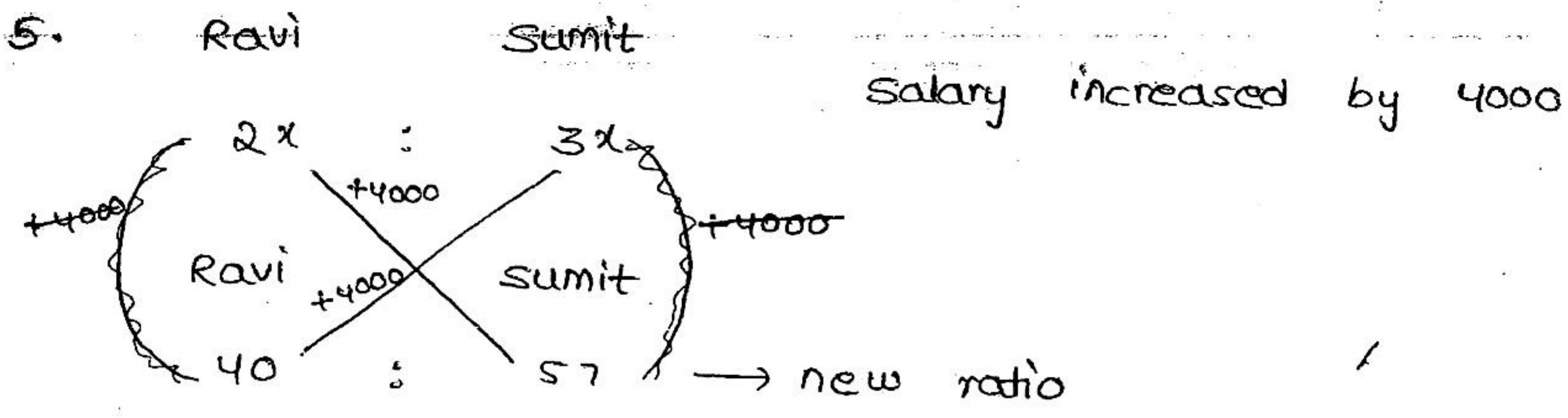
4. M : P : B
 $5 : 7 : 8$
40% 50% 75%

$$\begin{array}{l} \frac{5 \times 40}{100} : \frac{7 \times 50}{100} : \frac{8 \times 75}{100} \\ 2 : 3 : 4 \end{array}$$

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

$$10\% \uparrow = x + \frac{x}{10} = \frac{11x}{10}$$

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



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

$$x = 21,000$$

$\therefore$ None of these.

6.

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

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

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

$$17p = 510$$

$$1p = 30$$

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

$$= 60 : 90 : 360$$

7.

A	:	B	:	C	
3		4		5	$\leftarrow$
5%		10%		15%	

$\downarrow$

$4 \times 200 = 800$
 $\frac{10\% +}{810}$

$\frac{2430}{30} \leftarrow 30\%$

 2400

$$(3+4+5)$$

$$\downarrow$$

$$12p = 2400$$

$$1p = 200$$

$$\frac{2700}{60} = 45$$

P.9 No:- 62

1. Mixture of 60 lit

Milk water

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

$$2 : 1$$

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

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

$\xrightarrow{\text{new ratio}}$

$+x$

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

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

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

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

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

$$M : W$$

$$5 : 3$$

↓

$$(5 \times 2) : (3 \times 2)$$

$$10 \text{ lit} : 6 \text{ lit}$$

+4

$$14 \text{ lit} : 6 \text{ lit}$$

$$7 \text{ lit} : 3 \text{ lit}$$

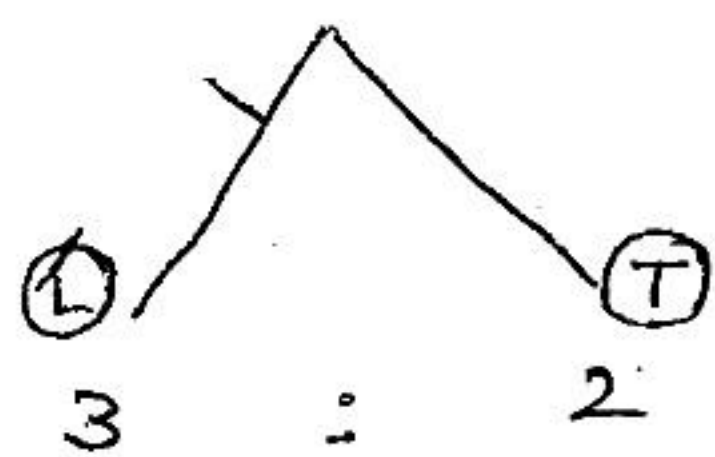
3.

A (60 kg)

B (100 kg)

$$5p = 60$$

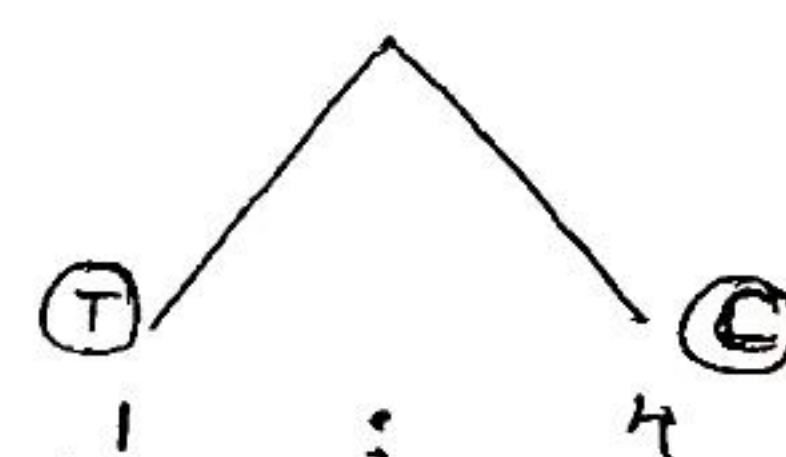
$$1 \text{ part} = 12 \text{ kg}$$



$$\downarrow$$

$$(2 \times 12)$$

$$24$$



$$\downarrow$$

$$(1 \times 20)$$

$$20$$

$$+ \quad \quad \quad$$

$$= 44 \text{ kg}$$

$$5p = 100$$

$$1 \text{ part} = 20 \text{ kg}$$

4.

A

B

C

$$G : C$$

$$G : C$$

$$G : C$$

$$7 : 2$$

$$7 : 11$$

$$\left(\frac{7}{9} + \frac{7}{18} \right) : \left(\frac{2}{9} + \frac{11}{18} \right)$$

$$\text{Total parts} = 9$$

$$\text{Total parts} = 18$$

$$\frac{7}{9} : \frac{2}{9}$$

$$\frac{7}{18} : \frac{11}{18}$$

$$21 : 15$$

$$7 : 5$$

(each part)

$$5. \quad A = B + 7 = x + 8 + 7 = x + 15 = \boxed{25}$$

$$B = C + 8 = x + 8 = \boxed{18}$$

$$C = x = \boxed{10}$$

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

$$x = 10$$

$$A : B : C$$

$$25 : 18 : 10$$

6. 25 p 10 p 5 p

1 : 2 : 3

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

$$60p = 30 \times 100$$

1 p = 50 NO's of 1 paise coins

7.

Income

A : B

5 : 4

↓

$$5 \times 800$$

$$= 4000/-$$

expenditure

A : B

3 : 2

$$2p = 1600$$

$$p = 800$$

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