

EXERCISE - 18 (K.C. Nag, Arithmetic)

(From this exercise sum no. 1-15 will be in your syllabus)

1. The proportional part of gold in the ornament is $\frac{3}{5} (\frac{3}{3+2})$.

∴ The % of gold in the ornament is $\frac{3}{5} \times 100 = 60\%$

2. 65% of $50 \text{ kg} = \frac{65}{100}$ of $50 \text{ kg} = 32\frac{1}{2} \text{ kg} = 32.5 \text{ kg}$

20% of $50 \text{ kg} = \frac{20}{100}$ of $50 \text{ kg} = 10 \text{ kg}$

15% of $50 \text{ kg} = \frac{15}{100}$ of $50 \text{ kg} = 7.5 \text{ kg}$

∴ To prepare 50 kg of gunpowder nitre will be needed by 32.5 kg , that of charcoal will be 10 kg and sulphur will be needed by 7.5 kg .

3. According to the question,

When A's income is Rs. 125 then B earns Rs. 100

" " " " " " B earns Rs. $\frac{100}{125}$

" " " " " " " " $Rs. \frac{100}{125} \times 100$

$= Rs. 80$

∴ B earns $(100 - 80)\%$ or 20% less than A.

4. Let the man had $Rn. x$ at the beginning.

\therefore He donated 10% of $Rn. x = \frac{10}{100}$ of $Rn. x = Rn. \frac{x}{10}$

He spent $46\frac{2}{3}\%$ of $Rn. x = \frac{140}{3}$ of $Rn. x$
 $= \frac{140}{3 \times 100}$ of $Rn. x = Rn. \frac{7x}{15}$

According to the question,

$$x - \left(\frac{x}{10} + \frac{7x}{15}\right) = 72$$

$$\text{or } x - \left(\frac{3x + 14x}{30}\right) = 72$$

$$\text{or } x - \frac{17x}{30} = 72$$

$$\text{or } \frac{30x - 17x}{30} = 72$$

$$\text{or } \frac{13x}{30} = 72 \quad \text{or } x = \frac{72 \times 30}{13} = Rn. 166.15$$

\therefore He had $Rn. 166.15$ in the beginning.

5. On the first day the price of one mango was $Rn. (150 \div 15) = Rn. 10$ and in the second day the price of one mango was $Rn. (132 \div 12) = Rn. 11$

\therefore $Rn. 10$ in the first day is equivalent to $Rn. 11$ in the second day

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\therefore The price of mango has increased by 10%.