

# Aptitude Assignment 6.

- ① A does  $\frac{4}{5}$ th of work  $\rightarrow$  in  $\frac{3}{5}$  of time B.

$$\text{Work} = \text{Time} \times \text{Efficiency}$$

$$\frac{(A \times \frac{3}{5})}{\frac{3}{4}} = \frac{B \times 1}{1}$$

$$A \times \frac{3}{5} \times \frac{4}{3} = B$$

$$4A = 5B$$

$$A:B = 5:4$$

They can complete the whole work together in 12 days

$$(5+4)x \times 12 = 108x$$

Time taken by A alone to complete the work =  $\frac{108x}{5x} = 21.6$  days

Answer: 21.6 days

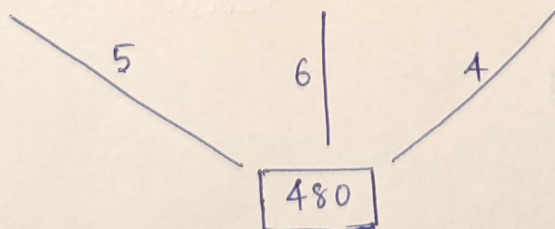
②

$$\underbrace{1M + 3W + 4C}_{96 \text{ hours}}$$

$$\underbrace{2M + 8C}_{80 \text{ hours}}$$

$$\underbrace{2M + 3W}_{120 \text{ hours}}$$

$$\underbrace{10M + 5W}_{?}$$



$$2M + 8C = 6$$

$$\boxed{M + 4C = 3}$$

$$\underline{1M + 3W + 4C = 5}$$

$$3 + 3W = 5$$

$$3W = 2$$

$$\boxed{W = \frac{2}{3}}$$

$$2M + 3W = 4$$

$$2M + 3 \times \frac{2}{3} = 4$$

$$2M = 2$$

$$\boxed{M = 1}$$

$$\begin{aligned} 10M + 5W &= 10 \times 1 + 5 \times \frac{2}{3} \\ &= 10 + \frac{10}{3} = \frac{30+10}{3} \\ &= \frac{40}{3} \end{aligned}$$

$$\text{Work} = \text{Time} \times \text{Efficiency}$$

$$\text{Time} = \frac{\text{Work}}{\text{Efficiency}} = \frac{480}{40/3} = \frac{12}{40 \times 3} = 36 \text{ hours}$$

10 men and 5 women complete the work in 36 hours

**Answer: 36 hours**

$$\textcircled{3} \text{ Sale increased by } 57 \frac{1}{7} \% = \frac{(57 \times 7) + 1}{7} = \frac{400}{7} = 57.14 \%$$

$$\text{price of ticket increased by } 16 \frac{2}{3} \% = \frac{(16 \times 3) + 2}{3} = \frac{50}{3} = 16.66 \%$$

$$\text{Let price} = 100$$

$$\text{Sale} = 200$$

$$\text{Revenue} = \text{price} \times \text{sale} = 100 \times 200 = 20000 \text{ Rs}$$

$$\text{price} = \frac{116.66}{100} \times 100 = 116.66$$

$$\text{Sale} = \frac{157.14}{100} \times 200 = 314.28$$

$$\text{Revenue} = 116.66 \times 314.28 = 36664 \text{ Rs}$$

$$\% \text{ increase in Revenue} = \frac{36664 - 20000}{20000} \times 100 = 83.32 \%$$

**Answer: 83.32%**

④

1600 soldiers

60 days

900 grams of food every day

$$\text{Total food Available} = 1600 \times 60 \times \frac{900}{1000} = 86400 \text{ kg}$$

$$\text{Food consumed till 40 days} = 1600 \times 40 \times \frac{900}{1000} = 57600 \text{ kg}$$

$$\text{Food available after 40 days} = 86400 - 57600 = 28800 \text{ kg}$$

$$\text{Soldiers available after 40 days} = 1600 - 400 = 1200$$

if remaining soldiers consume 1000g per day ~~food~~ will

$$\text{remain for} = \frac{28800}{1200 \times 1} = 24 \text{ days}$$

Answer : 24 days

⑤

$$\text{Let CP} = x$$

$$\text{If CP} = \frac{90}{100} \times x \quad \text{and} \quad \text{SP} = \frac{90}{100} \times x \times \frac{125}{100}$$

$$\text{S.P} = \frac{110}{100} \times x$$

Then dealer would lose

if the bicycle sold for new SP + 60 he would be in 25% profit

$$\therefore \text{new SP} - \text{old SP} = 60$$

$$\left( \frac{90}{100} \times x \times \frac{125}{100} \right) - \left( \frac{110}{100} \times x \right) = 60$$

$$1.125x - 1.1x = 60$$

$$\text{CP} = x = \frac{60}{0.025} = 2400 \text{ Rs}$$

Answer : 2400 Rs