

Q5/04

1) $S+M \Rightarrow 32 \text{ days}$
 $1 \text{d of } (S+M) = \frac{1}{32}$

$$R+(S+M) = 24 \text{ days}$$
$$1 \text{d}^w \text{ of } (R+S+M) = \frac{1}{24}$$

$1 \text{d work of } R \Rightarrow \frac{1}{96}$

$$\frac{1}{32} - \frac{1}{24} \Rightarrow \frac{1}{24} - \frac{1}{32} \Rightarrow \frac{4-3}{96} \Rightarrow \boxed{\frac{1}{96}}$$

Rohan takes 96 days

2) A built in 20d
B built in 30d

C destroy in 60d

$1 \text{d of } A = \frac{1}{20}$

$1 \text{d of } B = \frac{1}{30}$

$1 \text{d of } C \Rightarrow -\frac{1}{60}$

$$\frac{1}{20} + \frac{1}{30} - \frac{1}{60} \Rightarrow \frac{3+2-1}{60} \Rightarrow \frac{4}{60} \Rightarrow \boxed{15 \text{ days}}$$