

⑥ Person/s	A	B	C	together
work done in unit time	$\frac{1}{10}$	$\frac{1}{12}$	$\frac{1}{15}$	$\frac{1}{x}$
acc to con.				

$$\frac{1}{x} = \frac{1}{10} + \frac{1}{12} + \frac{1}{15}$$

$$= \frac{6+5+4}{60}$$

$$= \frac{15}{60}$$

$$\Rightarrow x = 4$$

⑦ Person/s	A	B	C	together
time to do work (in h)	24	16	x	8
work done in unit time	$\frac{1}{24}$	$\frac{1}{16}$	$\frac{1}{x}$	$\frac{1}{8}$

acc to condition

$$\frac{1}{24} + \frac{1}{16} + \frac{1}{x} = \frac{1}{8}$$

$$\Rightarrow \frac{1}{x} = \frac{1}{8} - \frac{1}{16} - \frac{1}{24}$$

$$= \frac{6-3-2}{48}$$

$$\frac{1}{x} = \frac{1}{48}$$

$$\Rightarrow x = 48$$

required time = 48 hours