

$$y = 36$$

Therefore

Number of days taken by women to finish the work = 18

Number of days taken by men to finish the work = 36

Q.2

Let us take

Speed of train =  $x$  km/h

Speed of Bus =  $y$  km/h

A.T.Q.

$$\frac{60}{x} + \frac{240}{y} = 4 \quad \text{--- (1)}$$

$$\frac{100}{x} + \frac{200}{y} = \frac{25}{6} \quad \text{--- (2)}$$

put  $\frac{1}{x} = m$  and  $\frac{1}{y} = n$

$$60m + 240n = 4 \quad \text{--- (3)}$$

$$100m + 200n = \frac{250}{6}$$

$$600m + 2400n = 40 \quad \text{--- (5)}$$

Now, subtract eq 4 from 5, to get

$$1200n = 13$$

$$n = \frac{13}{1200} = \frac{1}{80}$$

Substitute the values of  $n$  in eq 3 to get  
 $60m + 3 = 4$

$$m = \frac{1}{60}$$

$$m = \frac{1}{n} = \frac{1}{60}$$

$$n = 60$$

$$\text{and } y = \frac{1}{n}$$

$$y = 80$$

Therefore

Speed of train = 60 km/h

Speed of bus = 80 km/h