Ex-3.6 Word problems

2(i) Speed of rowing boat = x km/hr

" " current = y km/hr

Down stream — Speed = d/t

$$x+y = \frac{20}{2}$$

$$x+y = 10 \quad \text{--(i)}$$

Up stream –

$$x-y = \frac{4}{2}$$

$$x-y = 2 \quad \text{--(ii)}$$

2(ii) 1 woman finish Work = x days

1 man " " = y days

Ist $\frac{2}{x} + \frac{5}{y} = \frac{1}{4}$ --(i)

IInd $\frac{3}{x} + \frac{6}{y} = \frac{1}{3}$ --(ii)

2(iii) Speed of train = x km/hr

" " bus = y km/hr

Cond^{n} I — time = d/v

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

IInd $\frac{100}{x} + \frac{200}{y} = 4 + \frac{10}{60}$

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

Ex-3.7

(1) Age of Ani = x yrs

" " Biju = y yrs

I $x-y=3$ or $y-x=3$ --(i)

II $2x - \frac{y}{2} = 30$

or $4x-y=60$ --(ii)

(2) Ist friend = x

IInd " = y

I $x+100 = 2(y-100)$

$x-2y = -300$ --(i)

II $6(x-10) = y+10$

$6x-y = 70$ --(ii)

(3) Speed of train = x km/hr

Time = y hr

Distance = Speed × Time = xy

I $(x+6)(y-2) = xy$

$xy - 2x + 6y - 12 = xy$

$-2x + 6y = 12$ --(i)

II $(x-10)(y+3) = xy$

$xy + 3x - 10y - 30 = xy$

$3x - 10y = 30$ --(ii)