36

2) $x = 18 \text{ —— } 2$

$y = 36 \text{ —— } 1$

3

$x+y = \frac{\left(\frac{2}{3} \times 36^{4}\right)}{3} = \boxed{8 \text{ days}}$

10) $A + B = 9$ (Eff)

$\frac{A}{B} = \frac{3}{1}$

$T.W = 4 \times 9 = 36$

$A = \frac{36}{3} = 12$

$B = \frac{36}{1} = 36$

60

13) $A = 10 \text{ —— } 6$

$B = 12 \text{ —— } 5$

$C = 15 \text{ —— } 4$

15 cars/day

$A+B+C = \frac{75 \not{9} 60}{15} = \frac{45}{15} = \boxed{3 \text{ days}}$

17) $\frac{A}{B} = \frac{2}{1}$

$T.W. = 1 \times 12 = 12$

$A+B = \frac{12}{3} = \boxed{4 \text{ days}}$

18) $A = 45$ days

$\frac{A}{B} = \frac{180}{100} = \frac{9}{5}$

$T.W. = A = 9 \times 45 = 405$

$A+B = \frac{405}{14}$

$A+B = 28\frac{13}{14}$

19) $\frac{A}{B} = \frac{3}{1}$ (Eff)

Eff	Day
$1x$	30
$3x$	90

$2x = 60$

$\boxed{x = 30}$

$\boxed{90}$

$A = 30 \text{ —— } 3$

$B = 90 \text{ —— } 1$

$A+B = \frac{90}{4} = 22.5$ days

20) $\frac{A}{B} = \frac{2}{1}$

$A + B = 14$

$T.W. = 3 \times 14 = 42$

$A = \frac{42}{2} = 21$ days

21)

	Time	Effic
A	6	1
B	3	2
C	2	3
		6

$A + B + C = 2$

$T.W = 6 \times 2 = 12$

$B = \frac{12}{2}$

$B = 6$ days

22) $\frac{A}{B} = \frac{1}{2}$

	Eff
C	1.5
A+B	3

$T.W. = 1.5 \times 40 = 60$ mts

$A + B + C = \frac{60}{4.5} = \frac{120}{9} = 13\frac{3}{9} = 13\frac{1}{3}$ days

23)

$\frac{A}{B} = \frac{2}{1}$

$\frac{C}{B} = \frac{2}{1}$

	time	eff
A	2	1
B	1	2
C	2	1

$TW = 4 \times 12 = 48$

$A = \frac{48}{1} = 48 \text{ days}$

25)

$A = T+3 \longrightarrow 9 \longrightarrow 2$

$B = T+12 \longrightarrow 18 \longrightarrow 1$

$A+B = T \longrightarrow 6 \longrightarrow 3$

18

$T = 6$

$$\frac{1}{T+3} + \frac{1}{T+12} = \frac{1}{T}$$

$$\frac{(T+12)+(T+3)}{T^2+12T+3T+36} = \frac{1}{T}$$

$$2T^2+15T = T^2+15T+36$$

$$T^2 = 36 \quad \boxed{T = 6}$$

360

29) $A+B=72 \quad -5$

$B+C=120 \quad -3$

$C+A=90 \quad -4$

$2(A+B+C) \quad -12$

$A+B+C \quad -6$

$B+C \quad -3$

$A=\frac{360}{3}=120 \text{ days}$

Alternate day Work

60

1) A = 20 — 3

B = 30 — 2

I	II
A	B
3	2

days	ಗಾಡಿ
2	5
24 days	60

×12 ×12

120

2) A = 40 — 3

B = 30 — 4

I	II
3	4

days	ಗಾಡಿ
2	7
34	119
$34\frac{1}{3}$	120

×17 ×17 +1

Ans = $34\frac{1}{3}$ days

60

3) A = 10 — 6

B = 20 — 3

C = 60 — 1

10

I	II	III
A	C	B

6 + 1 + 3 = 10

days	ಗಾಡಿ
3	10
18 days	60

×6 ×6

Ans = 18 days