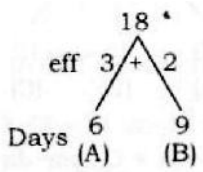
1.



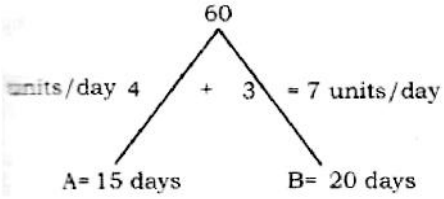
A's one day work = 3 units

B;s one day work = 2 units

(A + B) complete the whole work in

$$\frac{T.W}{eff.of\ A+B} = \frac{18}{(3+2)} = 3.6 \text{ days}$$

2.



4 days work of A and B is $7 \times 4 = 28$ units

work left 60 — 28 = 32 units

$$\frac{Re\,st\ work}{Total\ work} = \frac{32}{60}, \text{ function} = \frac{8}{15}$$

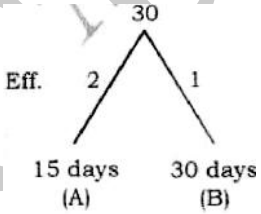
3. Cultivate in 1 day

A can cultivate $\frac{2}{5}$ th of land in 6 days

A can cultivate 1 part of land in $6 \times \frac{5}{2} = 15$ days

B can cultivate $\frac{1}{3}$rd of land in 10 days

B can cultivate 1 part of land in 30 days



T.W = 30 units

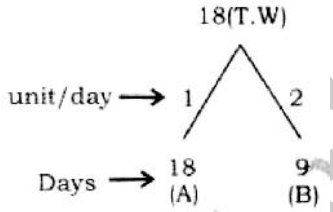
$\frac{4}{5}$ th of work $= \frac{4}{5} \times 30 = 24$ units

$\therefore$ $\frac{4}{5}$th work done by A + B in $= \frac{24}{3}$ days = 8 days

4. If A does a work in 18 days.

ATQ,

B does same work in 9 day.

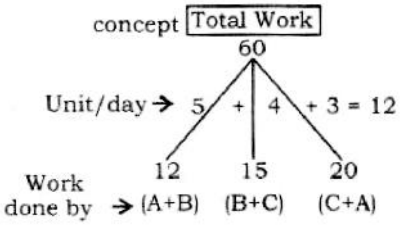


$= \frac{3}{18} = \frac{1}{6}$ part

5. $A + B + C = \frac{24}{7}$

$= 3\frac{3}{7}$ days

6. Concept



Description :

* In these kind of Questions, always take total work as L.C.M of no of days. Here T.W. is 60.

* If A + B complete the whole work in 12 days, so their one day work will be 5 unit. Similarly we will calculate the one day work for other two pair.

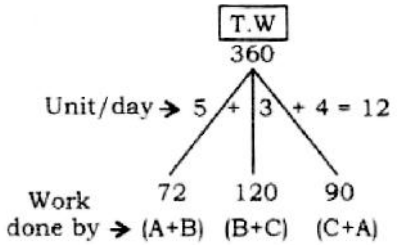
(Here, 12 unit represents twice of the work done by A, B and C. So we will divide it.

work done by (A + B + C)/day = 6 units/day

$(A + B + C) = \frac{12}{2}$ $\therefore$ Total time taken by (A + B + C)

$$\frac{Total\ work}{T.W\ done\ by\ (A+B+C)\ /\ day} = \frac{60}{6} = 10 \text{ days}$$

7.

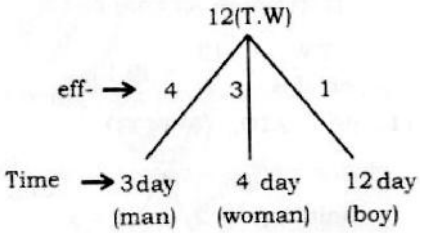


[Like Q : 1]

work done by (A + B + C) per day = 6 units/day

$= \frac{360}{6} = 60$ days

8.



If they to complete the 12 units work in $\frac{1}{4}$ of day

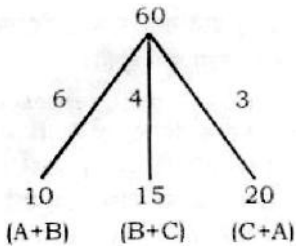
So it mean their combined efficiency should be 48 units/

(1 man + 1 woman)'s efficiency = 4 + 3 = 7 units

unit left = 48 — = 41 units

Now no of boys required $= \frac{T.W}{eff\ of\ a\ boy} = \frac{41}{1} = 41$ boys

9.



A + B + C work 13/2 units/day

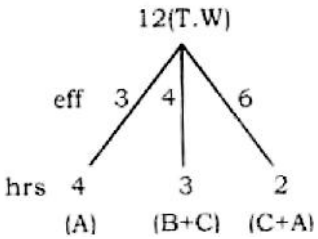
A + B work 6 unit/work

C work/day = [(A + B + C) — (A + B)]

$= \frac{13}{2} - \frac{6}{1} = \frac{1}{2}$ unit/day

C will finish in $\frac{60}{\frac{1}{2}} = 120$ days

10.



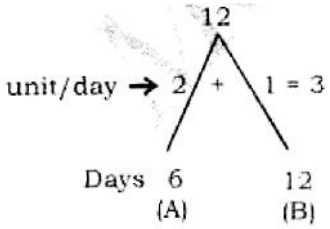
If (A + C)'s one day work = 6 units and A's one day work = 3 units then C's one day work = 6 — 3 = 3 units.

(B + C)'s one day work = 4 units

then B's one day work = 1 unit

B can complee the whole in $\frac{T.W}{eff\ of\ B} = \frac{12}{1} = 12$ hrs

11.



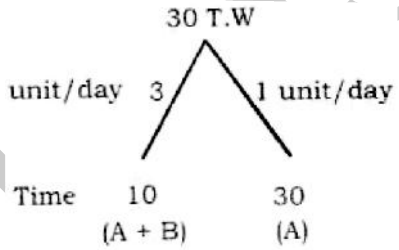
work done by A + B per day (A + B) = 3 units

work done by A/day = 2

So,

The portion of the work done by A $= \frac{2}{3}$

12.

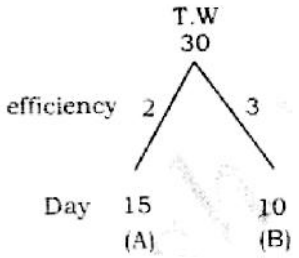


A + B — A = B's efficiency

3 — 1 = B's efficiency , 2 = B's efficiency

B alone does in $= \frac{30}{2} = 15$ days

13.



If A and B worked till last with same efficiency. Then their profit/wages will be divided in the ratio of efficiency

$\Rightarrow A \quad B \quad = 5$

2 : 3 ↓×6000

↓×6000 30,000

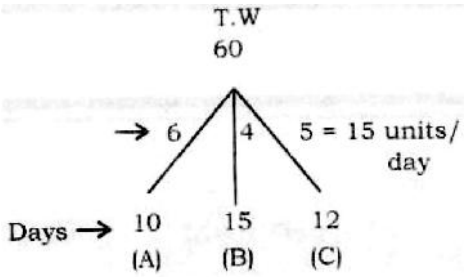
12000

14. A can do $\frac{1}{2}$ of a piece of work in 5 days

A can do 1 unit of the work in $\frac{5 \times 2}{1} = 10$ days

Similarly B complete 1 unit of work in $= \frac{9 \times 5}{3} = 15$ days

C complete 1 unit of work in $= 8 \times \frac{3}{2} = 12$ days



= A + B + C one day work = 15 units

$\Rightarrow$ They will complete the whole work in $\frac{60}{15}$ = 4 days

15. A man and a boy get Rs. 800 for 5 days

A man and a boy get Rs. $\frac{800}{5}$ = 160 for 1 day.

If man is twice efficient than boy. So their efficiency will be in ratio 2 : 1. (M : B)

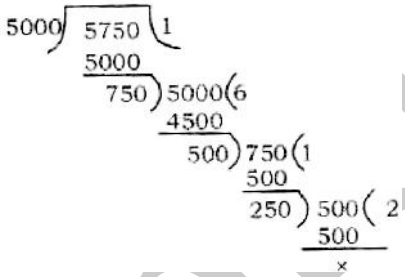
Daily wages of the boy is $\frac{1}{3} \times 460 = Rs.53\frac{1}{3}$

16. Try to solve these kind of question by option

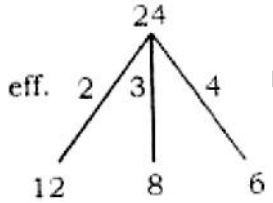
Because of his being absent he was paid Rs. 750 lessnow check with option. Since max. possible daily wages is asked so it will be 250

Or

It is required to find the highest common factor (HCF) of 5750 and 500



17.



2(A + B + C) = 9 units/day $\Rightarrow$ A + B + C $\frac{9}{2}$ units

(C + A) = 4 unit/day

B's one day work = $\frac{9}{2} - \frac{4}{1}$

= $\frac{1}{2}$ unit/day $\Rightarrow \frac{T.W}{eff.of\ B} = \frac{24 \times}{1}$ = 48 days

18. Let total work be 50 units

$\frac{4}{5} \times$ any multiple of 5

A does $\frac{4}{5}$th of work $\rightarrow \frac{4}{5} \times 50$ = 40 units in 20 days

So,

A does 2 units/day $\Rightarrow$ work left = 50 — 40 = 10 units

B's work per day = $\frac{4}{3}$

B's will do whole work = $\frac{50}{\frac{4}{3}} = 37\frac{1}{2}$ days

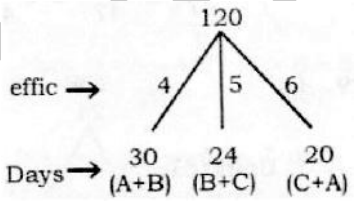
19. Let total work be 1 unit

A and B completes $1 - \frac{7}{10} = \frac{3}{10}$ of work in 4 days.

They will complete the whole in $\frac{3}{10}$ work in 4 days

1 work in $\frac{4 \times 10}{3} = 13\frac{1}{3}$ days

20.



= 2(A + B + C) = 15

(A + B + C) = $\frac{15}{2}$ units/day

(A + B + C)'s 10 day work = $\frac{15}{2} \times 10$ = 75 units

work left 120 — 75 = 45 units

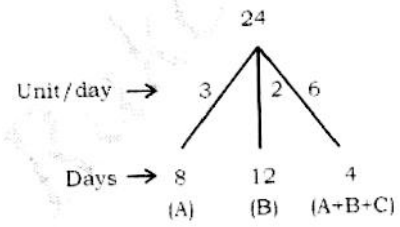
Now A will do remaining work in

A's work →

(A + B + C) - (B + C) $\Rightarrow \frac{15}{2} - 5 \Rightarrow \frac{5}{2}$ units/day

A will complete = $\frac{T.W}{unitt\ /\ day} = \frac{45}{5} \times 2 = 18$ days

21.



efficiency of C

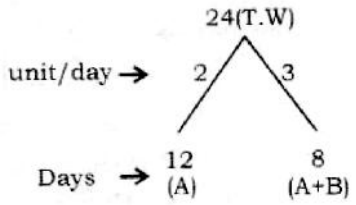
= A + B + C — A — B = 6 — 3 — 2 = 1 unit/day

efficiency of B = 2 units, efficiency of A = 3 units

Share/profit of C = $\frac{eff.of\ C}{Total\ eff.} \times$ Total amount

$= \frac{1}{6} \times 4500 = \text{Rs. } 750$

22.



(A + B) one day work in 3 units

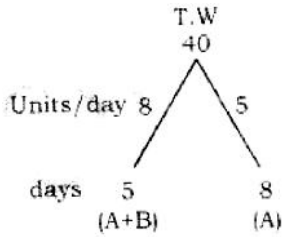
A alone day work is 2 units

B's one day work = 3 — 2 = 1 unit/day

B will complete the whole in $\frac{T.W}{Unit\ done\ per\ day}$

$= \frac{24}{1} = 24$ days

23.



(A + B)'s one day work = 8 units

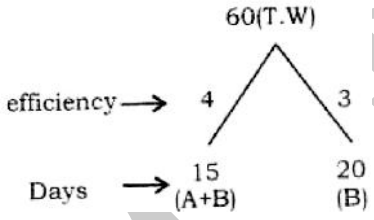
A's one day work = 5 units

So, B's one day work = 8 — 5 = 3 units

B alone can do the whole work in $\frac{T.W}{units\ /\ days}$

$= \frac{40}{3} = 13\frac{1}{3}$ days

24.



(A + B)'s one day work = 4 units

B's one day work = 3 units

A's one day work = (A +B)'s work —B's work = 4 — 3 = 1 unit

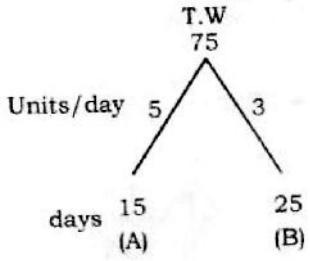
A will complete whole work in $\frac{60}{1} = 60$ days

25. A completes $\frac{1}{3}$ unit of work in 5 days

A complete 1 unit of work in $\frac{5}{1} \times 3 = 15$ days

B completes $\frac{2}{5}$ unit of work in 10 days

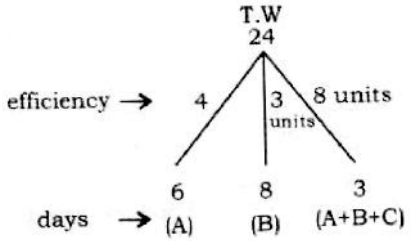
B completes 1 unit of work in $\frac{10}{2} \times 5 = 25$ days



(A + B) alone day work = 5 + 3 = 8 units

(A + B) complete whole work in = $\frac{75}{8} = 9\frac{3}{8}$ days

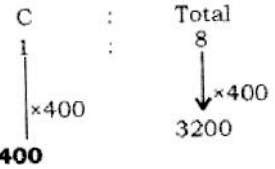
26.



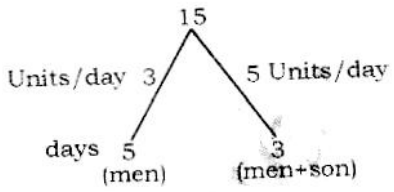
C's efficiency is (A + B + C)'s efficiency

(A + B)'s efficiency 8 — 7 = 1 unit/day

So, C's share will be in ratio



27.



Son's efficiency = 5 — 3 = 2 units/days

Son will do in $\frac{15}{2} = 7.5$ days

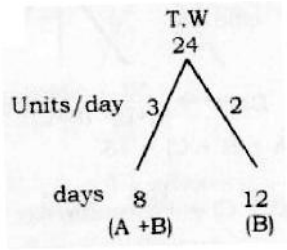
28. eff. of : 2(A + B + C) = 47

$A + B + C = \frac{47}{2}$

(A + B + C) will complete the whole work in

$$\frac{\frac{120}{47}}{2} = \frac{240}{47} = 5\frac{5}{47} \text{ days}$$

29.



B's one day work = 2 units/days

A's one day work = 3 — 2 = 1 unit/day

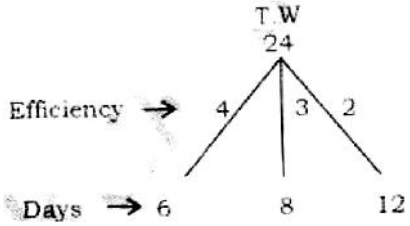
4 days work of 'B' = 4×2 units/ days = 8 units

work left = 24 — 8 = 16 units

A will complete the remaining work in

$$\frac{16 units}{1 unit / day} = 16 \text{ days}$$

30.



A's one day work = 4 — 2 = 2 units

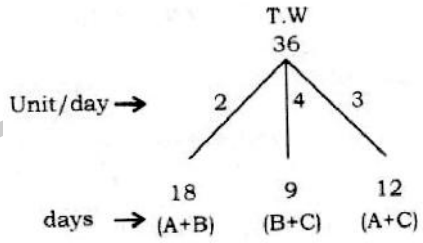
B's ne day work = 3 — 2 = 1 unit

C's one day work = 2 — 1 = 1 unit

A and C complete the whole work

$$= \frac{T.W}{eff.of\ A+B} = \frac{24}{2+1} = 8 \text{ days}$$

31.



$\Rightarrow 2(A + B + C) = 9$ units/day

$A + B + C = \frac{9}{2}$ units/day , $A + C = 3$ units/day

B's one day work is

$$\Rightarrow \frac{9}{2} - \frac{3}{1} = \frac{9-6}{2} = \frac{3}{2} \text{ units/days}$$

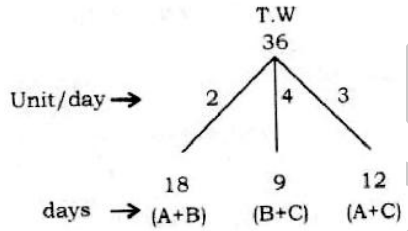
$$\Rightarrow \text{complete the wole work in} = \frac{36}{\frac{3}{2}} = 24 \text{ days}$$

32. A cmplete $\frac{2}{3}$ units in 8 days

A completess 1 unit in $8 \times \frac{3}{2} = 12$ days

B cmpletes $1\frac{3}{5}$ unit of work in 6 days

B completes 1 unit of work in $6 \times \frac{5}{3} =$ 10 days



A and B will complete the whole work in

$$\frac{(T.W)}{(efficiency\ of\ A+B)} = \frac{60}{6+5} = 5\frac{5}{11}$$

33. P cmpletes $\frac{1}{4}$ of work in 10 days

P completes full of work in $\frac{10}{1} \times 4 = 40$ days

Q completes 40$ of work in 145 days

Q completes full 100% of work in $= \frac{145}{40} \times 100 = 362.5$ days

R completes $\frac{1}{3}$ of work in —13 days

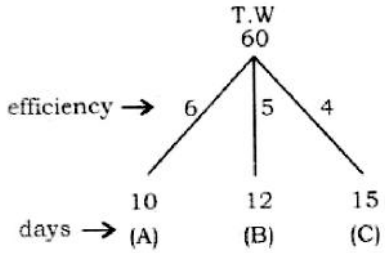
R completes full of work in $\frac{13}{1} \times 3 = = 39$ days

S completes $\frac{1}{6}$ of work in 7 days

S completes full of work in $\frac{7}{1} \times 6 = 42$ days

Clearly, we can see R completes the work list.

34.

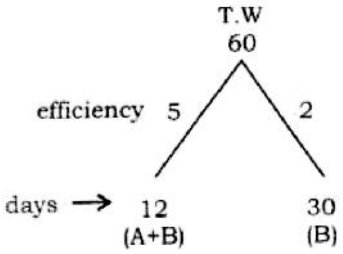


A + B + C one day work is (6 + 5 + 4) = 15 units

(A + B + C) can do the whole work in $= \frac{60}{15}$

= 4 days

35.



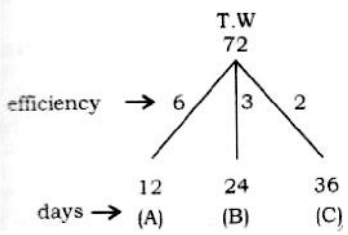
(A + B)'s one day work is 5 units

B's ne day work is 2 units

So, A one day work is = 5 — 2 = 3 units

A will complete the whole work in = $\frac{60}{3}$ = 20 days

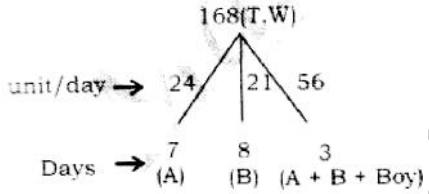
36.



A + B + C = 11 units/day

A + B + C do whole work in $\frac{72}{11} = 6\frac{6}{1}$ days

37.



Boy's efficiency = Total eff. — eff. f A + B

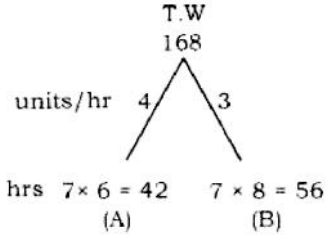
= 56 — (24 + 21) = 11

For 56 units (A + B + Boy) get Rs. 1400

∴ 1 units (A + B + Boy) = Rs. 25

boy get 11 yunits = 25 × 11 = Rs. 275

38.



A + B one hour work = 7 unit

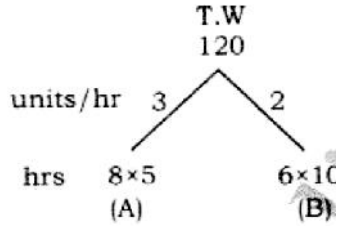
⇒(A +B)'s 8 hours work = 8 × 7

= 56 units/day

(A + B) complete the whole work in = $\frac{168}{56}$

= 3 days

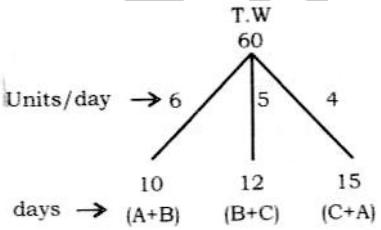
39.



A and B do 5 units/hour so they will do 5 × 8 = 40 units in 8 hours or a day. and the whole work will be complete in

$= \frac{T.W}{40\,units\,/\,day} \Rightarrow \frac{120}{40} \Rightarrow 3$ days

40.

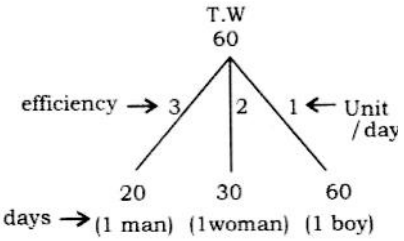


2(A + B + C) = 15 units/days ⇒ (A + B + C) = $\frac{15}{2}$ units/days

(A + B) = 6 units/days ⇒ $C = \frac{15}{2} - 6 = \frac{3}{2}$ units/days

C will complete the work in = $\frac{60}{\frac{3}{2}}$ = 40 days

41.



(2 men and 8 women)'s one day work is

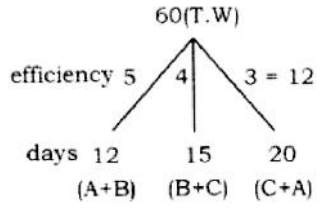
= [(2 × 3) + (8 × 2] = 6 + 16 = 22 units

In 2 days (2 Men + 8 Women) will do = 44 units Remaining work 60 - 44 = 16 units will be complete by boys in 2 days.

So, 8 units of work will be done by boys in 1day and one boy does one units/days. So 8 boys are required to do 8 units.

= 8 boys

42.



2(A + B + C) = 12 units/day

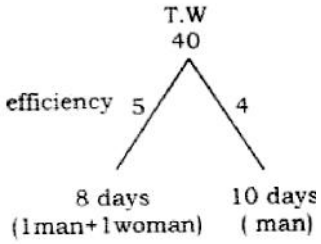
A + B + C = 6 units/day

(A + C) complete 3 units/day

B's one day work = 3 units

B will complete whole work in $= \frac{60}{33} = 20$ days

43.



(M + W) One day work = 5 units

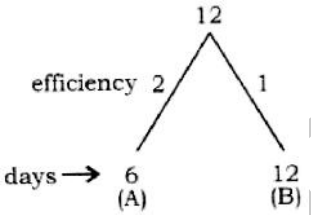
M's one day work = 4 units

So,

woman's one day work = 5 — 4 = 1 unit

Woman will complete in $= \frac{40}{1} = 40$ days

44.



A + B can complete the whole work in

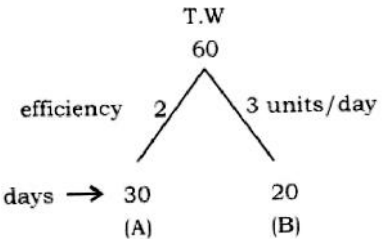
$\frac{T.W}{efficiancy\ of\ A\ and\ B} = \frac{12}{2+1} = 4$ days

45. A can do $\frac{1}{6}$ of work in 5 days

A can do 1 of work in $\frac{5}{1} \times 6 = 30$ days

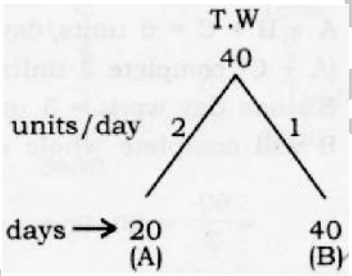
B can do $\frac{2}{5}$ of work in 8 days

B can do 1 work in $8 \times \frac{5}{2} = 20$ days



A and B will complete the whole work in $= \frac{60}{(2+3)} = 12$ days

46.



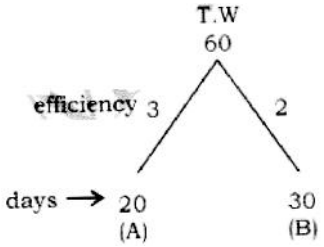
(A + B)'s one day work is (2 + 1) unit

(A + B)'s 5 day work is $3 \times 5 = 15$ units

Work left = 40 — 15 = 25

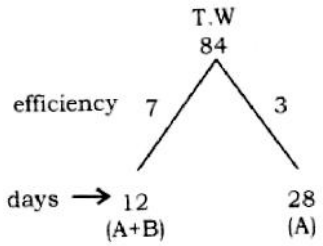
Fraction of work left $= \frac{work\ left}{total\ work} = \frac{25}{40} = \frac{5}{8}$

47.



(A + B) can do the whole work together in $= \frac{360}{3+2} = 12$ days

48.

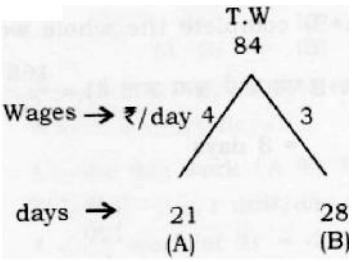


B's efficiency = (A + B) —A = 7 — 3 = 4 units/day

B can digit alone in

$\frac{T.W}{efficiancy\ of\ B} = \frac{84}{4} = 21$ days

49.



(A + B)'s one day wage = 4 + 3 = Rs. 7

Money Rs. 84 is sufficient to pay wages for

$= \frac{84}{(4+3)} \frac{(total\ money)}{one\ day\ wages} \Rightarrow 12$ days

50. (A + B + C)'s one day earning = Rs. 150

(A + C)'s one day earning = Rs. 94

B's one day earning = (A + B + C) — (A + C)

=150 — 94 = Rs. 56

(B + C)'s one day earning = Rs. 76

C's one day earning = 76 — 56 = Rs. 20