Revision

Unit 1 and Unit 2

. A can do 1/3rd of a work in 5 days and B can do 2/5th of the work in 10 days. In how many days both A and B together can do the work?

a) 13 2/3 days

b) 9 3/8 days

c) 18 5/8 days

d) 13 days

Answer Option B

- A Can complete full work in 15 days
- B can complete full work in 10* 5 /2 =25 days
- A & B together can complete it in 15*25/40=75/8

A and B working together can finish a job in T days. If A works alone and completes the job, he will take T+5 days. If B works alone and completes the same job, he will take T+45 days. What is T?

a) 25 days
b) 60 days
c) 15 days
d) None of these

- If we take Option C
- i.e A and B together takes = T days = 15 Days
- A =15+5=20 days
- B =15 + 45 =60 days
- A and B together = 20* 60 / 80 = 15

hence verified

- Walking 6/7th of his usual speed, a man is 12 minutes late. The usual time taken by him to cover that distance is:
- A) 1 hour B) 1 hr 12min C) 1 hr 15 min D) 1 hr 20 min

Answer B

- 1/7   12 minutes
- 1   84 min
- Since he was late by 12 min
- So normal time 84-12=72 min

- A car is 250 metres behind the bus. The car and bus are moving with speed 60 km/hr and 35 km/hr respectively. The car will be ahead of bus by 250 metres in:
- A) 37 seconds B) 48 seconds C) 72 seconds D) 68 seconds

- D=500 m
- S= 25 Km ph = 25 * 5 / 18 m /sec
- T=D/S =500/ 25 *5 /18 =500*18/25*5=72 sec

- A tank is filled by two taps in half an hour .If the first tap alone takes 2 hours to fill the tank, Find the time taken by second tap alone to fill the tank.
- A 40 min
- B 80 min
- C 120 min
- D 25 min

Option A

- X * Y / Y-X
- ½ *2 / (2- ½) = 1 / (3/2)= 2/3 hr
- = 2/3 * 60 = 40 min

- In covering a distance , the speeds of A and B are in the ratio of 3 : 4 . A takes 30 minutes more than B to reach the destination The time taken by A to reach the destination is
- A 1 hr
- B 2 Hr
- C 4 Hr
- D 9 Hr

Option B

- Speed Ratio A:B= 3:4
- Time Ratio A:B = 4 : 3

Suppose A is taking 4x min

B is taking 3x min

Gap is given 30 min

So 4x-3x= 30 min

- X=30 min
- So Time taken by A = 4*30 =120 min=2hr

- A Contractor undertook the responsibility to complete a road in 120 days He deployed 100 persons at the work and after 45 days he found only 1/4th part completed. To complete the work in time, number of extra persons required will be

- A 120 B 160 C 80 D 240

Option C

- Method 1

100 workers working for 45 days 1/4 task is completed

Same set of 100 Workers working for another set of 45 days another 1/4 task will be completed which means after 90 days 1/4 + 1/4 = 1/2 task is completed

if same set of 100 workers working for another 30 days after 90 days means in total 120 days these 100 workers will finish more than half the task

- so clearly after 45 days he should not hire 100 or more than 100 additional workers because task left after 120 days will not be that much or same 100 original workers if allowed to work for full 120 days more than half task they can complete themselves so answer should be less than 100 so only one option so ans is 80

- Method 2

100 workers working for 45 days can finish 1/4 of the task so in 90 days half the task will be completed and in 180 days full task will be completed so clearly after 120 days 2/3 task was completed and only 1/3 task was left

so we need to calculate 1/3 of the task needs to be completed by how many men in 75 days (120-45) where as 1/3 of the task these 100 men can complete in 60 days so apply M1 D1=M2 D2 100 *60 =M2*75   M2 =80 Ans

- Method 3

M1 D1 W2 = M 2 D 2 W1

find out after 120 days what fraction of work will be left

100 workers working for 45 days can finish 1/4 of the task so in 90 days half the task will be completed and in 180 days full task will be completed so clearly after 120 days 2/3 task was completed and only 1/3 task was left

Now apply M1 D1 W2 = M2 D2 W1

M1=100 D1=45 W1 =1/4

M2=?   D2= 120-45=75   W2 = 1/3

i.e 100 men can complete in 45 days 1/4 of work how many men can complete the pending 1/3 of task in pending 75 days

M2 =80 Ans