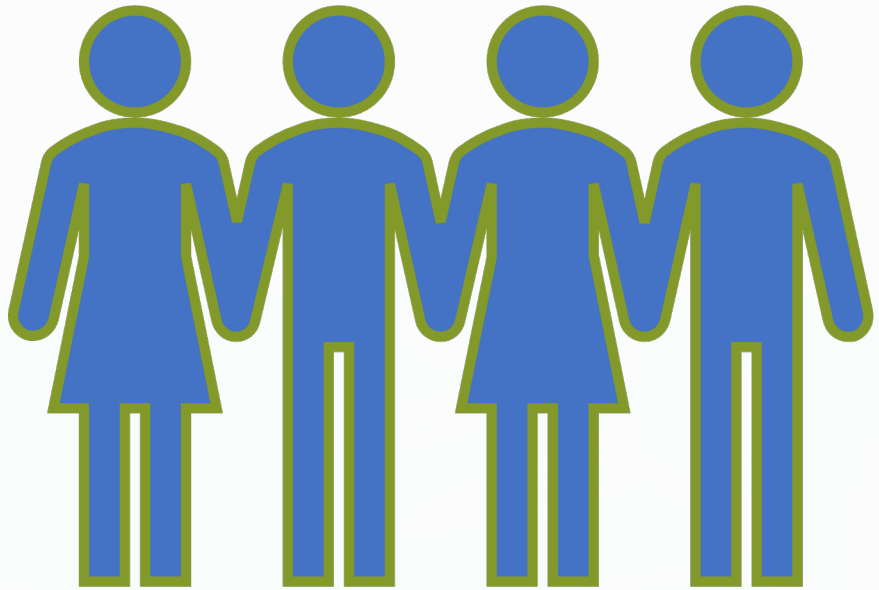
Time, Men &Work
Part 1



Basic Formulae

$$No: of\ days = \frac{Total\ Work}{1\ Day's\ Work}$$

$$\frac{M_1 D_1}{W_1} = \frac{M_2 D_2}{W_2}$$

Problem 1

If 10 men working 6 hours a day can do a work in 88 days. Then 22 men working 8 hours a day can do it in how many days?

a. 60 days

b. 35 days

c. 95 days

d. 30 days

Problem 2

If 34 men completed $\frac{2}{5}th$ of a work in 8 days working 9 hours a day. How many more man should be engaged to finish the rest of the work in 6 days working 9 hours a day?

a. 50 men
b. 34 men
c. 68 men
d. 102 men

Problem 3

Arun can type 40 papers in 10 hours. Arun and Beena can type 65 papers in 10 hours. In how many hours can Beena type 35 papers?

a. 16

b. 17

c. 14

d. 18

Problem 4

If Anu and Binu finish a work in 10 and 15 days respectively, what will be number of days taken by both to complete the work when both work together?

a. 5.3

b. 4.5

c. 4

d. 6

Problem 5 – Alternate days

Aneesh can build a wall in 20 days while Bineesh can build the same wall in 30 days. If they work on alternate days in how many days, will the wall be completed if A start the job?

a. 22

b. 23

c. 24

d. 25

Problem 6 - Negative work

If A build the wall in 20 days and B can destroy that wall in 30 days and work on alternate days. What will be the number of days required to build the wall for the first time?

a. 125

b. 120

c. 118

d. 115

Problem 7

P and Q can do a piece of work in 15 days. Q and R can do the same work in 20 days. P and R can do it in 12 days. In how many days can Q alone finish the work?

a. 20

b. 24

c. 30

d. 60

Problem 8 - % efficiency

P can do a work in 27 days. Q is 50% more efficient than P. In how many days can Q do the work?

a. 15

b. 13.5

c. 18

d.15.5

Problem 9

Ram is 3 times as fast as Shyam and can complete the work in 48 days less than Shyam. Find the time in which they can complete the work together?

a. 15 days
b. 18 days
c. 19 days
d. 17 days

Problem 10

B is twice as efficient as ‘A’ and ‘C’ is 50% more efficient than B. If B and C together can complete a work in 10 days, how much time it takes for A and B to complete the work, if they work on alternate days starting with ‘A’?

a. 33 days

b. 33 ½ days

c. 32 days

d. 32 ½ days

Problem 11

A piece of work can be done by 6 men and 5 women in 6 days or 3 men and 4 women in 10 days. It can be done by 9 men and 15 women in

a. 1 day

b. 2 days

c. 3 days

d. 4 days

Problem 12

If 20 men or 24 women or 40 boys can do a task in 12 days working for 8 hours a day, how many men working with 6 women and 2 boys take to do a task twice times as big working for 5 hours a day for 12 days?

a. 8 men

b. 28 men

c. 58 men

d. 122 men

Problem 13 – Leak Problem

Pipe A usually fills a tank in 5 hours. On account of a leak at the bottom of the tank, it takes pipe A one more hour to fill the tank. How long will the leak take to empty a full tank if pipe A is shut?

a. 10 hours
b. 5 hours
c. 40 hours
d. 30 hours

Problem 14

Pipe A can fill a tank in 20 minutes. Pipe A and B both are opened and after 6 minutes pipe A is closed and then pipe B takes 15 minutes to fill the tank. In how many minutes can pipe B fill the tank?

a. 33 mins

b. 35 mins

c. 30 mins

d. 37 mins

Problem 15

Two pipes A and B together can fill a cistern in 4 hours. Had they been opened separately, then B would have taken 6 hours more than A to fill the cistern. How much time will be taken by A to fill the cistern separately?

a. 1 hour
b. 2 hours
c. 6 hours
d. 8 hours

Problem 16

Two pipes A and B can fill a cistern in $37\frac{1}{2}$ minutes and 45 minutes respectively. Both pipes are opened. The cistern will be filled in just half an hour, if the B is turned off after:

A. 5 min.
B. 9 min.
C. 10 min.
D. 15 min.

Ans: option b

Problem 17

An empty tank can be filled by pipe A in 4 hours and by pipe B in 6 hours. If the two pipes are opened for 1 hour each alternately with A as the first opening pipe, then in how many hours will the tank be filled

a. $1\frac{3}{4}$

b. $2\frac{3}{5}$

c. $4\frac{2}{3}$

d. $5\frac{1}{2}$

Problem 18

A tank is connected to three pipes – Pipe A, B and C. Pipe A can fill the tank in 6 hours, B can fill the tank in 8 hours and Pipe C can empty the full tank in 12 hours. How much time will it take to fill the tank completely if all three pipes are working together?

(A) 4 hours

(B) 4 hours 48 minutes

(C) 5 hours

(D) 5 hours 20 minutes

Problem 19

Three pipes A, B and C can fill a tank from empty to full in 30 minutes, 20 minutes, and 10 minutes respectively. When the tank is empty, all the three pipes are opened. A, B and C discharge chemical solutions P,Q and R respectively. What is the proportion of the solution R in the liquid in the tank after 3 minutes?

A. $\frac{5}{11}$

B. $\frac{6}{11}$

C. $\frac{7}{11}$

D. $\frac{8}{11}$

Problem 20

Four pipes A, B, C and D can fill a tank with water in 15, 20, 30 and 60 hours, respectively. Pipe A is opened at 4 a.m., B at 5 a.m., C at 6 a.m. and D at 7 a.m. When is the tank filled up completely?

a. 9:30 am.

b. 10:00 am.

c. 10:30 am.

d. 11:00 am.

Thank you

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