



Unitary Method

General problems:

1. A machine can copy six pages in 9 seconds. How many pages can it copy in 24 minutes?
[Dhaka Bank Ltd. (TO) – 2016 (Written)] Ans: 960 pages.
2. 7 kgs of mango cost as much as 10 kgs of apple and 1 kg of orange. 7 kgs of orange cost as much as 1 kg of mango and 2 kgs of apple. How many kgs of apple can be purchased by the amount of money required to purchase 12 kgs of mango? [City Bank Ltd.– 2001 (Written)] & [Pubali Bank (SO)-2000-(Written)] Ans: 18 kg Apple
3. For making a cupboard it requires human labor three times the labor required to make a bench. Six carpenters can make 36 benches and 5 cupboards in 12 days. How many days will 10 carpenters require to make 61 benches and 8 cupboards? [Janata, Sonali, Agrani Rupali Bank (Officer) Exam -2008 (Written)] & [RAKUB-(SO)- 2011– (Written)] Ans: 12 days.
4. A laborer is paid Tk. 8 per hour for an 8-hour day . If he works overtime above 8 hours in a single day. he is paid 1.5 times the rate he is paid for regular hours. If the laborer received Tk. 80 for a single day's work, how long did he work on that day? [Jibon Bima (Officer)-2009(Written)] & [One Bank Ltd. (PO) – 2008 –(Written)]. Ans: 9hr 20mins
5. A female worker of a factory serves on the basis of monthly salary. At the end of every year she gets a fixed increment. Her monthly salary becomes Tk. 4500 after 4 years of service and Tk. 5000 after 8 years of service. Find the salary at the beginning of her service and the amount of annual increment of salary. [Union Bank Ltd. (SO) -2014 (Written)] + [Class 9-10 (12.4)] Ans: Salary at beginning is Tk. 4000 and Increment is Tk. 125

Self Task:

6. এক ব্যক্তি মাসিক বেতনে চাকরি করেন। বছর শেষে নির্দিষ্ট বেতন বৃদ্ধি পান। চার বছর পর তার ৩৫০০ টাকা এবং ১০ বছর পর ৪২৫০ টাকা হলে, তার মাসিক কত টাকা বেতনে চাকরি শুরু হয় এবং বার্ষিক বৃদ্ধি কত? [Sonali Bank Ltd. (SO) Written Exam.-2014-(written)]
উত্তর: ব্যক্তির চাকরি শুরু হয়েছিল ৩০০০ টাকায় এবং বার্ষিক বৃদ্ধি ১২৫ টাকা
7. 4,000 soldiers in a camp have enough food for 190 days. After 30 days, 800 soldiers are posted elsewhere. How long would the remaining food last? [Pubali Bank Ltd.(JO)-2013(written)] Ans: 200 days

Self Task:

8. In Bosnia, food for 30 days was stored for 2000 UN troops, But this stock of food lasted 40 days when some French soldiers were withdrawn, How many French soldiers withdrew? [AB Bank (PO)-1993 (Written)] Ans: 500

9. A garrison of 3300 men had provisions for 32 days, when given at the rate of 850 gms per head. At the end of 7 days, a reinforcement arrives and it was for that the provisions will last 17 days more, when given at the rate of 825 gms per head, What is the strength of the reinforcement? [*testbook.com*] **Ans: 1700**

 **Time & work related:**

10. A task can be completed in 20 days by 30 workers. How many additional workers need to be hired to complete the task in 15 days? [*Standard Bank (TAO)-2013(Written)*] **Ans: 10 workers**
11. 60 workers can complete a work in 20 days. How many extra workers will be needed to do the same work in 15 days? [*IFIC Bank Ltd. (Off) – 2013 (Written)*] **Ans: 20.**

 **Three steps related:**

12. 50 persons can do a work in 12 days by working 8 hours a day, working how many hours per day can 60 persons finish the work in 16 days? [*ICB Capital Management (AP)-2019 (Written)*] + [*BRTC-(AD)-2021- (Written)*] **Ans: 5hrs**

Self task:

13. If 24 machines can make 5 devices in 30 minutes, how many hours will it take 4 machine to make 15 device? [*Standard bank TAO 13*] + [*Janata Bank (off-Cash)-2020(Written)*] **Ans: 9hrs**
14. 20 workers can dig a canal in 17 days, working daily 8 hours. How many hours 34 workers need to work daily to complete within 8 days? [*IFIC Bank (TSO)-2020 (Written)*] **Ans: 10 hrs**
15. 15 person working 8 hrs a days can complete a work in 21 days. How many days will 14 person take to complete a work $1\frac{1}{2}$ time as great, if they work 6 hrs a days? [*doubtnut.com*] **Ans: 45 days**
16. If 9 engines consume 24 metric tones of coal, when each is working 8 hours a day, how much coal will be required for 8 engines, each running 13 hours a day, it being given that 3 engines of former type consume as much as 4 engines of latter type? [*BB(Cash off)-2017*] & [*Janata Bank (EO-Civil)-2017(written)*] **Ans: 26 m. tons**

Self Task:

17. If 5 engines consume 6 metric tones of coal when each is running 9 hours a day, how much coal (in metric tones) will be needed for 8 engines, each running 10 hours a day, it being given that 3 engines of the former type consume as much as 4 engines of latter type? [*examveda.com*] **Ans: 8 m.tons**

 **Equation Related:**

18. A certain number of men can finish a piece of work in 100 days. If there were 10 men less, it would take 10 days more for the work to be finished. How many men were there originally? [*Sadharon Bima (AM)-2019 (Written)*] **Ans: 110 men**
19. 20 men can finish a work in 30 days. After how many days should 5 men leave the work so that the work may be finished in 35 days? [*BKB-(SO)-2017(Written)*] **Ans: 15 days**

□Self Task:

20. 10 persons begin to work together on a job but after some days 4 persons leave. As a result, the job which could have been completed in 40 days is completed in 50 days. How many days after the commencement of the work did the 4 persons leave? [examveda.com]
Ans: 25 days

21. John appointed 25 persons to complete a small bridge in 40 days. After 20 days he appointed 15 more workers and the bridge was completed 5 days earlier. If he had not appointed additional workers by how many days he would have been behind the scheduled time? [IBA MBA-59th intake – Dec-2017] + [gmatclub.com]
Ans: 4days.

□Self Task:

22. Four persons, each of whom works at the same rate, were to complete a job according to a schedule. However, because of a argument, two of the 4 quit after working for 1 day. The remaining persons finished the job, but it required 2 more days than what had originally been scheduled. How many days were originally scheduled for completion of the job? [DBBL (PO)] -2003- (Written)
Ans: 3days.

23. A signed a contract for building a road of 1920 meters long within 120 days. He employed 160 workers for this task. But after 24 days he found that only 1/8 of the task has been finished. If A want to finish the road in time how many additional workers he has to employee? [Dhaka Bank (MTO)-2016](written) & [UCBL –(PO)-2017 (Written)]
Ans: 120 men

✍Learning point:

ত্রিকিক নিয়মের প্রশ্নে প্রথম বার ভগ্নাংশ আসলে উল্টিয়ে গুণ হয় আর দ্বিতীয় বার ভগ্নাংশ আসলে সরাসরি গুণ হয়।

24. A contract is to be completed in 56 days and 104 men were set to work, each working 8 hours a day. After 30 days, 2/5 of the work is completed. How many additional men be employed, so that the work may be completed in time if each man works 9 hours a day? [Al-Arafah Islami Bank (MTO)-2011(Written)]
Ans: 56 men.

□Self Task:

25. A contract is to be complete in 50 days and 105 men were set to work, each working 8 hrs a day, after 25 days, 2/5 of the work is finished. How many additional men be employed so that the work may be complete on time, each man now working 9 hrs a day? [www.competoid.com]
Ans: 35 men

26. A contract is to be completed in 46 days and 117 men were set to work, each working 8 hours a day. After 33 days, 4/7 of the work is completed. How many additional men may be employed so that the work may be completed in time, each man now working 9 hours a day? [Probasy Kallyan Bank Ltd.(SO)-2014(Written)] & RAKUB (Officer)-2011(Written)
Ans: 81 men

27. 60 men could complete a piece of work in 250 days. They worked together for 200 days. After that the work had to be stopped for 10 day due to bad weather. How many more men should be engaged to complete the work in time?[Combined 5Banks (Off-Cash)-2019(Written)]
Ans: 15

28. An engineer undertake a project to build up a road 15 km long in 300 days and employs 45 men for the purpose. After 100 days, he finds 2.5 km of the road has been completed. Find the number of extra men he must employ to finish the work. [Combine 6 Banks & 2 FIs-(SO)-2019(Written Cancelled)]
Ans: 68 man
29. A contractor employed 30 men to do a piece of work in 38 days. After 25 days, he employed 5 men more and the work was finished one day earlier. How many days he would have been behind, if he had not employed additional men? (Pubali Bank.Jun.Off.-2014)
Ans: 1 day

□ Self Task:

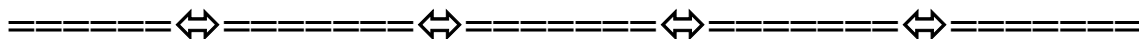
30. A contractor employed 20 men to do a piece of work in 40 days. After 15 days he employed 5 more men and the work was finished one day earlier. How many days he would have been behind, if he had not employed additional men? Ans: 5days]
31. A contractor undertook to do a certain piece of work in 40 days. He engages 100 men at the beginning and 100 more after 35 days and completes the work in stipulated (চুক্তিমাফিক) time. If he had not engaged the additional men, how many days behind schedule would it be finished? [Janata Bank- (EO)-2017(Written)]
Ans: 5 days

□ Self Task:

32. Ram decided to plough a farmland in 50 days. He employed 50 men in the beginning and 50 more after 35 days and completed the construction in stipulated time. If he had not employed the additional men. How many days behind schedule would it have been finished? [doubtmut.com]
Ans: 15 days
33. In a factory, one worker can produce one piece of M in 15 minutes and one piece of N in 20 minutes. How many workers are needed to produce 200 units of M and 300 units of N in exactly 10 hours? [MBA-IBA: 55th intake; Dec-2015]
Ans: 15

📁 Men & Women related: (এরকম আরো অনেক প্রশ্ন Time & Work টপিকে দেয়া হয়েছে)

34. Working 11 hours/day, 24 men and 33 women can complete the construction of a road in 78 days. The working capacity of 3 women equals to that of 1 man. Now, the authority decides that the road is to be constructed in 55 days by working 13 hours/day. If there are only 27 women present how many men will be needed? [MBA - IBA: 60th Batch; May-2018]
Ans: 33 men
35. The daily work of two men is equal to that of three women or that of four boys. By employing 14 men, 12 women and 12 boys, a certain work can be finished in 24 days. If it is required to finish it in 14 days and only men are available as additional labor, how many of them will be required? [m4maths.com]
Ans: 20 men
36. 10 men can complete a work in 7 days. But 10 women need 14 days to complete the same work. How many days will 5 men and 10 women need to complete the work? [Competoid.com]
Ans: 7 days.





Practice Part

 **Easy part:**

1. 30 people can build a house in 20 days. Because of bad weather 10 days after starting work they have stopped working for 6 days. How many additional people will need to complete the work in due time? [Class 7 (2.3)]
2. 39 persons can repair a road in 12 days, working 5 hours a day. In how many days will 30 persons, working 6 hours a day, complete the work? [sawaal.com]
3. 5 workers can reap crops of the land of 8 bigha of field in 6 days. How many days will 25 workers need to reap the land of 20 bigha? [Class-7(2.3)]
4. 8 persons can build a wall 140m long in 42 days. In how many days can 30 persons complete a similar wall 100 m long? [curioustab.com]
5. 400 person working 9 hours per day complete $\frac{1}{4}$ th of the work in 10 days. The number of additional persons, working 8hrs per day required to complete the remaining, working in 20 days is ? [myexaminer.net]
6. A fort had provision of food for 150 men for 45 days. After 10 days, 25 men left the fort. The number of days for which the remaining food will last, is: [toppr.com]
7. The work done by a man is double the work done by a woman in the same time. If 10 men can do a piece of work in 8 days, then in how many days that work can be done by 3 men and 4 women? [gmatclub.com]

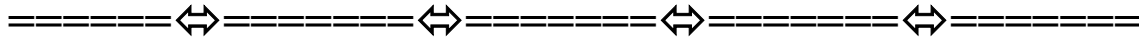
 **Medium part:**

8. Helpers are needed to prepare for the fete. Each helper can make either 2 large cakes per hour or 35 small cakes per hour. The kitchen is available for 3 hours and 20 large cakes and 700 small cakes are needed. How many helpers are required?
9. A contractor employs 60 persons for doing a job in 80 days. After 20 days, it was found that only one fifth of work was finished. How many more persons are to be employed to finish the job as per schedule? [AB bank PO 92 & 95] + [22th BCS Written]
10. A piece of work can be done by 16 men in 8 days working 12 hours a day. How many men are needed to complete another work, which is three times the first one, in 24 days working 8 hours a day, the efficiency of the second group being half that of the first group? [toppr.com]
11. The daily wages of a worker is Tk.100. 5 workers can do a work in 10 days. If you pay Tk.20 more daily, they agree to do 25% more work daily. If the proposal is accepted, then the total amount that could be saved is [doubtnut.com]

12. A certain number of people were supposed to complete a work in 24 days. The work, however took 32 days since 9 people were absent throughout. How many people were supposed to be working originally? [doubtnut.com]
13. A group of workers promise to complete a piece of work in 10 days, but five of them do not report for work. If it took the remaining workers 12 days to complete the work, then the number of workers originally hired was- [Uttara Bank (PO)-2017]
14. A certain number of men complete a piece of work in 60 days. If there were 8 men more than the work could be finish in 10 days less. How many men were originally there? [gmatclub.com]

Hard part: (শুধুমাত্র অতিরিক্ত প্রাকটিসের জন্য দেয়া হয়েছে। সময় থাকলে করে নিবেন)

15. A contractor undertakes to complete a work in 130 days. He employs 150 men for 25 days and they complete $\frac{1}{4}$ of the work. He then reduces the number of men to 100, who work for 60 days, after which there are 10 days holidays. How many men must be employed for the remaining period to finish the work? [sawaal.com]
16. 20 carpets are to weave by 40 women in 50 days working 8 hours per day. After 20 days, order of 6 more carpets came. To complete the total work on time, how many more hours per day they will have to work? [affairsccloud.com]
17. A contractor employed 200 workers. They finished $\frac{5}{6}$ of the work in 100 days. Due to rain the work stopped for 20 days and also destroyed $\frac{2}{5}$ of the work what was completed. After rain 150 workers came to the work. In how many days the work complete? [quora.com]
18. A garrison had provisions for a certain number of days. After 10 days, $\frac{1}{5}$ of the men desert and it is found that the provisions will now last just as long as before. How long was that? [examveda.com]
19. 3 men and 4 women can earn Tk. 3780 in 7 days. 11 men and 13 women can earn Tk. 15040 in 8 days. In what time will 7 men and 9 women earn Tk. 12400? [doubtnut.com]
20. Four persons, each of whom works at the same rate, were to complete a job according to a schedule. However, because of an agreement, two of the 4 quit after working for 1 day. The remaining persons finished the job, but it required 2 more days than what had originally been scheduled. How many days were originally scheduled for completion of the job?



List of Important Maths

Important (**)	Most important (***)
4,7,10,15,18,24,27,31,36	3,9,12,16,19,21,23,26,29,34
পরীক্ষার হলে যাওয়ার আগে খুব কম সময়ে রিভিশন দেয়ার জন্য এই লিস্টটি খুব কাজে লাগবে।	

