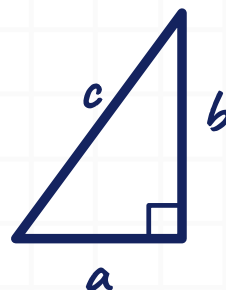
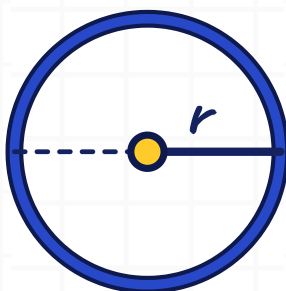


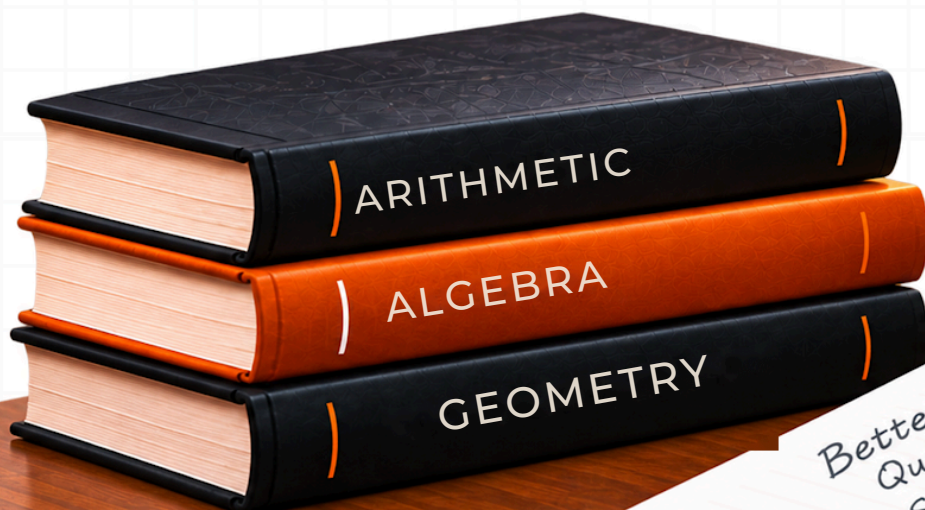
CAT PYQ

Time & Work

$$a^2 + b^2 = c^2$$



$$D = S \times T$$



Better
Questions
Stronger
Concepts
Brighter Future

48 Questions

Quantitative Aptitude

Years: 1990-2025

General Instructions

- (i) This collection contains **48 Quantitative Aptitude questions** classified under **Time & Work**, following the supplied CD PYQ sheet.
- (ii) **Coverage:** CAT 1990-2025. Questions are grouped by their source year and sitting, with continuous numbering from **1 to 48**.
- (iii) This collection has **32 multiple choice questions (MCQs)** and **16 Type In The Answer (TITA) questions**. Read every option before choosing the answer. Enter a response for questions marked "Type in the answer."
- (iv) All required shared passages and data sets for the selected questions are included. Blue range labels refer to the question numbers **in this collection**. Read the full passage, chart, table or conditions before answering.
- (v) Each question carries its original year or exam date, sitting where available, and source question number.
- (vi) Use this collection for practice. Follow the timing and marking scheme of the original sitting when attempting a timed exercise.
- (vii) Answer keys and solutions are not included. Passages and questions may continue onto the following page.

CAT 2025 Slot 1 - Questions 1-1

1. Arun, Varun and Tarun, if working alone, can complete a task in 24, 21, and 15 days, respectively. They charge Rs 2160, Rs 2400, and Rs 2160 per day, respectively, even if they are employed for a partial day. On any given day, any of the workers may or may not be employed to work. If the task needs to be completed in 10 days or less, then the minimum possible amount, in rupees, required to be paid for the entire task is

30 Nov 2025, Slot 1, Q60

(A) 38400

(B) 38880

(C) 34400

(D) 47040

CAT 2025 Slot 2 - Questions 2-2

2. Ankita is twice as efficient as Bipin, while Bipin is twice as efficient as Chandan. All three of them start together on a job, and Bipin leaves the job after 20 days. If the job got completed in 60 days, the number of days needed by Chandan to complete the job alone, is

30 Nov 2025, Slot 2, Q67

Type in the answer.

CAT 2025 Slot 3 - Questions 3-4

3. Teams A, B, and C consist of five, eight, and ten members, respectively, such that every member within a team is equally productive. Working separately, teams A, B, and C can complete a certain job in 40 hours, 50 hours, and 4 hours, respectively. Two members from team A, three members from team B, and one member from team C together start the job, and the member from team C leaves after 23 hours. The number of additional member(s) from team B, that would be required to replace the member from team C, to finish the job in the next one hour, is

30 Nov 2025, Slot 3, Q48

- | | |
|-------|-------|
| (A) 4 | (B) 2 |
| (C) 1 | (D) 3 |
-

4. The rate of water flow through three pipes A, B and C are in the ratio 4 : 9 : 36. An empty tank can be filled up completely by pipe A in 15 hours. If all the three pipes are used simultaneously to fill up this empty tank, the time, in minutes, required to fill up the entire tank completely is nearest to

30 Nov 2025, Slot 3, Q54

- | | |
|--------|--------|
| (A) 73 | (B) 78 |
| (C) 76 | (D) 71 |
-

CAT 2024 Slot 1 - Questions 5-5

5. Renu would take 15 days working 4 hours per day to complete a certain task whereas Seema would take 8 days working 5 hours per day to complete the same task. They decide to work together to complete this task. Seema agrees to work for double the number of hours per day as Renu, while Renu agrees to work for double the number of days as Seema. If Renu works 2 hours per day, then the number of days Seema will work, is

24 Nov 2024, Slot 1, Q51

Type in the answer.

CAT 2024 Slot 2 - Questions 6-6

6. Amal and Vimal together can complete a task in 150 days, while Vimal and Sunil together can complete the same task in 100 days. Amal starts working on the task and works for 75 days, then Vimal takes over and works for 135 days. Finally, Sunil takes over and completes the remaining task in 45 days. If Amal had started the task alone and worked on all days, Vimal had worked on every second day, and Sunil had worked on every third day, then the number of days required to complete the task would have been

24 Nov 2024, Slot 2, Q57

Type in the answer.

7. Sam can complete a job in 20 days when working alone. Mohit is twice as fast as Sam and thrice as fast as Ayna in the same job. They undertake a job with an arrangement where Sam and Mohit work together on the first day, Sam and Ayna on the second day, Mohit and Ayna on the third day, and this three-day pattern is repeated till the work gets completed. Then, the fraction of total work done by Sam is

24 Nov 2024, Slot 3, Q51

(A) $\frac{1}{20}$

(B) $\frac{3}{10}$

(C) $\frac{1}{5}$

(D) $\frac{3}{20}$

CAT 2023 Slot 1 - Questions 8-8

8. The amount of job that Amal, Sunil and Kamal can individually do in a day, are in harmonic progression. Kamal takes twice as much time as Amal to do the same amount of job. If Amal and Sunil work for 4 days and 9 days, respectively, Kamal needs to work for 16 days to finish the remaining job. Then the number of days Sunil will take to finish the job working alone, is

26 Nov 2023, Slot 1, Q60

Type in the answer.

CAT 2023 Slot 2 - Questions 9-9

9. Pipes A and C are fill pipes while Pipe B is a drain pipe of a tank. Pipe B empties the full tank in one hour less than the time taken by Pipe A to fill the empty tank. When pipes A, B and C are turned on together, the empty tank is filled in two hours. If pipes B and C are turned on together when the tank is empty and Pipe B is turned off after one hour, then Pipe C takes another one hour and 15 minutes to fill the remaining tank. If Pipe A can fill the empty tank in less than five hours, then the time taken, in minutes, by Pipe C to fill the empty tank is

26 Nov 2023, Slot 2, Q52

- | | |
|--------|---------|
| (A) 90 | (B) 120 |
| (C) 75 | (D) 60 |
-

CAT 2023 Slot 3 - Questions 10-11

10. Rahul, Rakshita and Gurmeet, working together, would have taken more than 7 days to finish a job. On the other hand, Rahul and Gurmeet, working together would have taken less than 15 days to finish the job. However, they all worked together for 6 days, followed by Rakshita, who worked alone for 3 more days to finish the job. If Rakshita had worked alone on the job then the number of days she would have taken to finish the job, cannot be

26 Nov 2023, Slot 3, Q53

- | | |
|--------|--------|
| (A) 20 | (B) 17 |
| (C) 16 | (D) 21 |

11. Gautam and Suhani, working together, can finish a job in 20 days. If Gautam does only 60% of his usual work on a day, Suhani must do 150% of her usual work on that day to exactly make up for it. Then, the number of days required by the faster worker to complete the job working alone is

26 Nov 2023, Slot 3, Q60

Type in the answer.

CAT 2022 Slot 2 - Questions 12-12

12. Working alone, the times taken by Anu, Tanu and Manu to complete any job are in the ratio 5 : 8 : 10. They accept a job which they can finish in 4 days if they all work together for 8 hours per day. However, Anu and Tanu work together for the first 6 days, working 6 hours 40 minutes per day. Then, the number of hours that Manu will take to complete the remaining job working alone is

27 Nov 2022, Slot 2, Q60

Type in the answer.

CAT 2022 Slot 3 - Questions 13-14

13. A group of N people worked on a project. They finished 35% of the project by working 7 hours a day for 10 days. Thereafter, 10 people left the group and the remaining people finished the rest of the project in 14 days by working 10 hours a day. Then the value of N is

27 Nov 2022, Slot 3, Q51

- (A) 150 (B) 23
(C) 36 (D) 140

14. Bob can finish a job in 40 days, if he works alone. Alex is twice as fast as Bob and thrice as fast as Cole in the same job. Suppose Alex and Bob work together on the first day, Bob and Cole work together on the second day, Cole and Alex work together on the third day, and then, they continue the work by repeating this three - day roster, with Alex and Bob working together on the fourth day, and so on. Then, the total number of days Alex would have worked when the job gets finished, is

27 Nov 2022, Slot 3, Q66

Type in the answer.

CAT 2021 Slot 1 - Questions 15-16

15. Anu, Vinu and Manu can complete a work alone in 15 days, 12 days and 20 days, respectively. Vinu works everyday. Anu works only on alternate days starting from the first day while Manu works only on alternate days starting from the second day. Then, the number of days needed to complete the work is

28 Nov 2021, Slot 1, Q48

- (A) 5 (B) 8
(C) 6 (D) 7

16. Amar, Akbar and Anthony are working on a project. Working together Amar and Akbar can complete the project in 1 year, Akbar and Anthony can complete in 16 months, Anthony and Amar can complete in 2 years. If the person who is neither the fastest nor the slowest works alone, the time in months he will take to complete the project is

28 Nov 2021, Slot 1, Q61

Type in the answer:

CAT 2021 Slot 2 - Questions 17-18

17. Anil can paint a house in 60 days while Bimal can paint it in 84 days. Anil starts painting and after 10 days, Bimal and Charu join him. Together, they complete the painting in 14 more days. If they are paid a total of ₹ 21000 for the job, then the share of Charu, in INR, proportionate to the work done by him, is

28 Nov 2021, Slot 2, Q59

- | | |
|----------|----------|
| (A) 9000 | (B) 9200 |
| (C) 9100 | (D) 9150 |

18. Two pipes A and B are attached to an empty water tank. Pipe A fills the tank while pipe B drains it. If pipe A is opened at 2 pm and pipe B is opened at 3 pm, then the tank becomes full at 10 pm. Instead, if pipe A is opened at 2 pm and pipe B is opened at 4 pm, then the tank becomes full at 6 pm. If pipe B is not opened at all, then the time, in minutes, taken to fill the tank is

28 Nov 2021, Slot 2, Q66

- | | |
|---------|---------|
| (A) 144 | (B) 140 |
| (C) 264 | (D) 120 |

CAT 2021 Slot 3 - Questions 19-20

19. One day, Rahul started a work at 9 AM and Gautam joined him two hours later. They then worked together and completed the work at 5 PM the same day. If both had started at 9 AM and worked together, the work would have been completed 30 minutes earlier. Working alone, the time Rahul would have taken, in hours, to complete the work is

28 Nov 2021, Slot 3, Q46

- (A) 11.5 (B) 10
(C) 12.5 (D) 12

20. Anil can paint a house in 12 days while Barun can paint it in 16 days. Anil, Barun, and Chandu undertake to paint the house for ₹ 24000 and the three of them together complete the painting in 6 days. If Chandu is paid in proportion to the work done by him, then the amount in INR received by him is

28 Nov 2021, Slot 3, Q62

Type in the answer.

CAT 2020 Slot 2 - Questions 21-21

21. John takes twice as much time as Jack to finish a job. Jack and Jim together take one-thirds of the time to finish the job than John takes working alone. Moreover, in order to finish the job, John takes three days more than that taken by three of them working together. In how many days will Jim finish the job working alone?

29 Nov 2020, Slot 2, Q52

Type in the answer.

CAT 2020 Slot 3 - Questions 22-22

22. A contractor agreed to construct a 6 km road in 200 days. He employed 140 persons for the work. After 60 days, he realized that only 1.5 km road has been completed. How many additional people would he need to employ in order to finish the work exactly on time?

29 Nov 2020, Slot 3, Q54

Type in the answer.

CAT 2019 Slot 1 - Questions 23-24

23. At their usual efficiency levels, A and B together finish a task in 12 days. If A had worked half as efficiently as she usually does, and B had worked thrice as efficiently as he usually does, the task would have been completed in 9 days. How many days would A take to finish the task if she works alone at her usual efficiency?

24 Nov 2019, Slot 1, Q86

- (A) 36 (B) 24
(C) 18 (D) 12

24. Three men and eight machines can finish a job in half the time taken by three machines and eight men to finish the same job. If two machines can finish the job in 13 days, then how many men can finish the job in 13 days?

24 Nov 2019, Slot 1, Q93

Type in the answer.

CAT 2019 Slot 2 - Questions 25-26

25. John gets Rs 57 per hour of regular work and Rs 114 per hour of overtime work. He works altogether 172 hours and his income from overtime hours is 15% of his income from regular hours. Then, for how many hours did he work overtime?

24 Nov 2019, Slot 2, Q88

Type in the answer.

26. Anil alone can do a job in 20 days while Sunil alone can do it in 40 days. Anil starts the job, and after 3 days, Sunil joins him. Again, after a few more days, Bimal joins them and they together finish the job. If Bimal has done 10% of the job, then in how many days was the job done?

24 Nov 2019, Slot 2, Q99

(A) 12

(B) 13

(C) 15

(D) 14

CAT 2018 Slot 1 - Questions 27-29

27. Humans and robots can both perform a job but at different efficiencies. Fifteen humans and five robots working together take thirty days to finish the job, whereas five humans and fifteen robots working together take sixty days to finish it. How many days will fifteen humans working together (without any robot) take to finish it?

25 Nov 2018, Slot 1, Q69

- (A) 45 (B) 36
(C) 32 (D) 40

28. When they work alone, B needs 25% more time to finish a job than A does. They two finish the job in 13 days in the following manner: A works alone till half the job is done, then A and B work together for four days, and finally B works alone to complete the remaining 5% of the job. In how many days can B alone finish the entire job?

25 Nov 2018, Slot 1, Q80

- (A) 20 (B) 22
(C) 16 (D) 18

29. A tank is fitted with pipes, some filling it and the rest draining it. All filling pipes fill at the same rate, and all draining pipes drain at the same rate. The empty tank gets completely filled in 6 hours when 6 filling and 5 draining pipes are on, but this time becomes 60 hours when 5 filling and 6 draining pipes are on. In how many hours will the empty tank get completely filled when one draining and two filling pipes are on?

25 Nov 2018, Slot 1, Q96

Type in the answer.

30. A water tank has inlets of two types A and B. All inlets of type A when open, bring in water at the same rate. All inlets of type B, when open, bring in water at the same rate. The empty tank is completely filled in 30 minutes if 10 inlets of type A and 45 inlets of type B are open, and in 1 hour if 8 inlets of type A and 18 inlets of type B are open. In how many minutes will the empty tank get completely filled if 7 inlets of type A and 27 inlets of type B are open?

25 Nov 2018, Slot 2, Q67

Type in the answer.

31. A tank is emptied everyday at a fixed time point. Immediately thereafter, either pump A or pump B or both start working until the tank is full. On Monday, A alone completed filling the tank at 8 pm. On Tuesday, B alone completed filling the tank at 6 pm. On Wednesday, A alone worked till 5 pm, and then B worked alone from 5 pm to 7 pm, to fill the tank. At what time was the tank filled on Thursday if both pumps were used simultaneously all along?

25 Nov 2018, Slot 2, Q81

- (A) 4:48 pm (B) 4:12 pm
(C) 4:24 pm (D) 4:36 pm

32. Ramesh and Ganesh can together complete a work in 16 days. After seven days of working together, Ramesh got sick and his efficiency fell by 30%. As a result, they completed the work in 17 days instead of 16 days. If Ganesh had worked alone after Ramesh got sick, in how many days would he have completed the remaining work?

25 Nov 2018, Slot 2, Q96

- (A) 14.5 (B) 11
(C) 13.5 (D) 12

CAT 2017 Slot 1 - Questions 33-33

33. A person can complete a job in 120 days. He works alone on Day 1. On Day 2, he is joined by another person who also can complete the job in exactly 120 days. On Day 3, they are joined by another person of equal efficiency. Like this, everyday a new person with the same efficiency joins the work. How many days are required to complete the job?

26 Nov 2017, Slot 1, Q68

Type in the answer.

CAT 2017 Slot 2 - Questions 34-35

34. A tank has an inlet pipe and an outlet pipe. If the outlet pipe is closed then the inlet pipe fills the empty tank in 8 hours. If the outlet pipe is open then the inlet pipe fills the empty tank in 10 hours. If only the outlet pipe is open then in how many hours the full tank becomes half-full?

26 Nov 2017, Slot 2, Q74

- | | |
|--------|--------|
| (A) 20 | (B) 30 |
| (C) 40 | (D) 45 |

35. Amal can complete a job in 10 days and Bimal can complete it in 8 days. Amal, Bimal and Kamal together complete the job in 4 days and are paid a total amount of Rs 1000 as remuneration. If this amount is shared by them in proportion to their work, then Kamal's share, in rupees, is

26 Nov 2017, Slot 2, Q79

- | | |
|---------|---------|
| (A) 100 | (B) 200 |
| (C) 300 | (D) 400 |

CAT 2005 - Questions 36-36

36. A chemical plant has four tanks (A, B, C, and D), each containing 1000 litres of a chemical. The chemical is being pumped from one tank to another as follows: From A to B @ 20 litres/minute From C to A @ 90 litres/minute From A to D @ 10 litres/minute From C to D @ 50 litres/minute From B to C @ 100 litres/minute From D to B @ 110 litres/minute Which tank gets emptied first, and how long does it take (in minutes) to get empty after pumping starts?

20 Nov 2005, Q2

(A) A,16.66

(B) C,20

(C) D,20

(D) D,25

CAT 2004 - Questions 37-37

37. In NutsAndBolts factory, one machine produces only nuts at the rate of 100 nuts per minute and needs to be cleaned for 5 minutes after production of every 1000 nuts. Another machine produces only bolts at the rate of 75 bolts per minute and needs to be cleaned for 10 minutes after production of every 1500 bolts. If both the machines start production at the same time, what is the minimum duration required for producing 9000 pairs of nuts and bolts?

21 Nov 2004, Q51

- | | |
|-----------------|-----------------|
| (A) 130 minutes | (B) 135 minutes |
| (C) 170 minutes | (D) 180 minutes |
-

CAT 2002 - Questions 38-39

38. It takes six technicians a total of 10 hr to build a new server from Direct Computer, with each working at the same rate. If six technicians start to build the server at 11 am, and one technician per hour is added beginning at 5 pm, at what time will the server be completed? [CAT 2002]

CAT 2002, Q95

- | | |
|-------------|----------|
| (A) 6.40 pm | (B) 7 pm |
| (C) 7.20 pm | (D) 8 pm |
-

39. Three small pumps and a large pump are filling a tank. Each of the three small pump works at $\frac{2}{3}$ the rate of the large pump. If all four pumps work at the same time, they should fill the tank in what fraction of the time that it would have taken the large pump alone?

CAT 2002, Q97

- | | |
|-------------------|-------------------|
| (A) $\frac{4}{7}$ | (B) $\frac{1}{3}$ |
| (C) $\frac{2}{3}$ | (D) $\frac{3}{4}$ |
-

CAT 2001 - Questions 40-41

40. A can complete a piece of work in 4 days. B takes double the time taken by A, C takes double that of B, and D takes double that of C to complete the same task. They are paired in groups of two each. One pair takes two-thirds the time needed by the second pair to complete the work. Which is the first pair?

CAT 2001, Q9

- (A) A and B
- (C) B and C

- (B) A and C
- (D) A and D

41. There's a lot of work in preparing a birthday dinner. Even after the turkey is in the oven, there's still the potatoes and gravy, yams, salad, and cranberries, not to mention setting the table. Three friends — Asit, Arnold and Afzal — work together to get all of these chores done. The time it takes them to do the work together is 6 hr less than Asit would have taken working alone, 1 hr less than Arnold would have taken alone, and half the time Afzal would have taken working alone. How long did it take them to do these chores working together?

CAT 2001, Q28

- (A) 20 min
- (C) 40 min

- (B) 30 min
- (D) 50 min

CAT 1998 - Questions 42-42

42. A company has a job to prepare certain number cans and there are three machines A, B and C for this job. A can complete the job in 3 days, B can complete the job in 4 days, and C can complete the job in 6 days. How many days will the company take to complete the job if all the machines are used simultaneously?

CAT 1998, Q51

(A) 4 days

(B) $\frac{4}{3}$ days

(C) 3 days

(D) 12 days

Questions 43 to 44

The Weirdo Holiday Resort follows a particular system of holidays for its employees. People are given holidays on the days where the first letter of the day of the week is the same as the first letter of their names. All employees work at the same rate.

43. Raja starts working on February 25(Sunday), 1996, and finishes the job on March 2, 1996. How much time would T and J take to finish the same job if both start on the same day as Raja?

CAT 1997, Q137

- | | |
|-------------------|--------------------------|
| (A) 4 days | (B) 5 days |
| (C) Either a or b | (D) Cannot be determined |

44. Starting on February 25, 1996 (Sunday), if Raja had finished his job on April 2, 1996, when would T and S together likely to have completed the job, had they started on the same day as Raja?

CAT 1997, Q138

- | | |
|--------------------|-----------------------|
| (A) March 15, 1996 | (B) March 14, 1996 |
| (C) March 22, 1996 | (D) Data insufficient |

CAT 1993 - Questions 45-45

45. A group of workers was put on a job. From the second day onwards, one worker was withdrawn each day. The job was finished when the last worker was withdrawn. Had no worker been withdrawn at any stage, the group would have finished the job in two-thirds the time. How many workers were there in the group?

CAT 1993, Q83

- (A) 2 (B) 3
(C) 5 (D) 11

CAT 1991 - Questions 46-47

46. Alord got an order from a garment manufacturer for 480 Denim Shirts. He brought 12 sewing machines and appointed some expert tailors to do the job. However, many didn't report to duty. As a result, each of those who did, had to stitch 32 more shirts than originally planned by Alord, with equal distribution of work. How many tailors had been appointed earlier and how many had not reported for work?

CAT 1991, Q64

- (A) 12,4
(B) 10,3
(C) 10,4
(D) None of these
-

47. Three machines, A, B and C can be used to produce a product. Machine A will take 60 hours to produce a million units. Machine B is twice as fast as Machine A. Machine C will take the same amount of time to produce a million units as A and B running together. How much time will be required to produce a million units if all the three machines are used simultaneously?

CAT 1991, Q78

- (A) 12 hours
(B) 10 hours
(C) 8 hours
(D) 6 hour
-

CAT 1990 - Questions 48-48

48. A, B and C individually can finish a work in 6, 8 and 15 hours respectively. They started the work together and after completing the work got Rs.94.60 in all. When they divide the money among themselves, A, B and C will respectively get (in Rs.)

CAT 1990, Q37

(A) 44, 33, 17.60

(B) 43, 27, 20, 24.40

(C) 45, 30, 19.60

(D) 42, 28, 24.60

- End of PYQ Collection -
