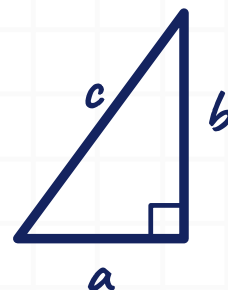
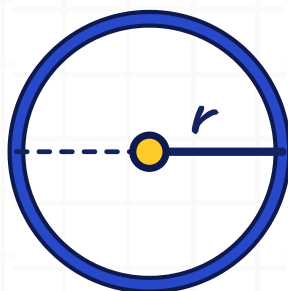
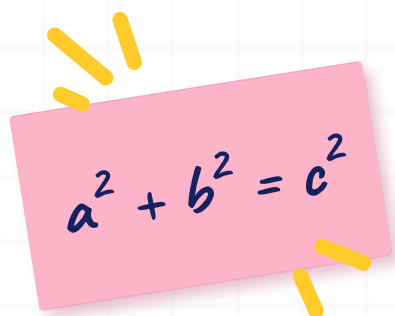
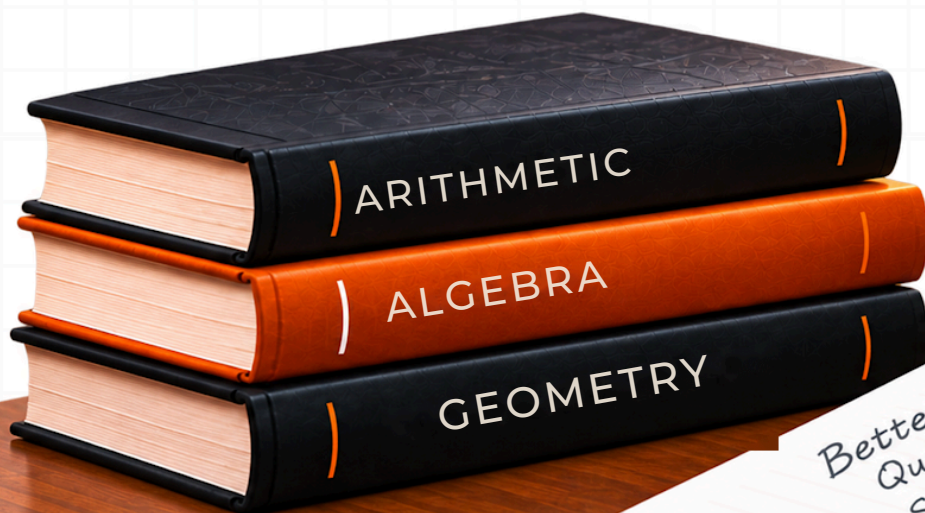


CAT PYQ

Remainders



$$\underline{D = S \times T}$$



Better
Questions
Stronger
Concepts
Brighter Future

19 Questions

Quantitative Aptitude

Years: 1990-2024

General Instructions

- (i) This collection contains **19 Quantitative Aptitude questions** classified under **Remainders**, following the supplied CD PYQ sheet.
- (ii) **Coverage:** CAT 1990-2024. Questions are grouped by their source year and sitting, with continuous numbering from **1 to 19**.
- (iii) This collection has **19 multiple choice questions (MCQs)**. Read every option before choosing the answer.
- (iv) Original mathematical expressions, question wording and option order are retained. Use the diagrams and data provided with each question.
- (v) Each question carries its original year or exam date, sitting where available, and source question number. References distinguish the two CAT 2003 sittings.
- (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 2024 Slot 1 - Questions 1-1

1. When 10^{100} is divided by 7, the remainder is

24 Nov 2024, Slot 1, Q52

(A) 3

(B) 4

(C) 1

(D) 6

2. When 3^{333} is divided by 11, the remainder is

24 Nov 2024, Slot 2, Q62

(A) 5

(B) 10

(C) 1

(D) 6

3. If 10^{68} is divided by 13, the remainder is

24 Nov 2024, Slot 3, Q50

(A) 5

(B) 8

(C) 9

(D) 4

4. If $A = \{6^{2n} - 35n - 1\}$, where $n = 1, 2, 3, \dots$ and $B = \{35(n-1)\}$, where $n = 1, 2, 3, \dots$ then which of the following is true?

25 Nov 2018, Slot 2, Q89

- (A) Every member of A is in B and at least one member of B is not in A
 - (B) Neither every member of A is in B nor every member of B is in A
 - (C) Every member of B is in A.
 - (D) At least one member of A is not in B
-

CAT 2005 - Questions 5-6

5. If $x = (16^3 + 17^3 + 18^3 + 19^3)$, then x divided by 70 leaves a remainder of

20 Nov 2005, Q1

- | | |
|--------|--------|
| (A) 0 | (B) 1 |
| (C) 69 | (D) 35 |
-

6. Let $n! = 1 * 2 * 3 * \dots * n$ for integer $n \geq 1$. If $p = 1! + (2 * 2!) + (3 * 3!) + \dots + (10 * 10!)$, then $p + 2$ when divided by 11! leaves a remainder of

20 Nov 2005, Q11

- | | |
|--------|-------|
| (A) 10 | (B) 0 |
| (C) 7 | (D) 1 |
-

CAT 2004 - Questions 7-7

7. The remainder, when $(15^{23} + 23^{23})$ is divided by 19, is

21 Nov 2004, Q72

(A) 4

(B) 15

(C) 0

(D) 18

CAT 2003 Re-test (15 Feb 2004) - Questions 8-9

8. What is the sum of all two-digit numbers that give a remainder of 3 when they are divided by 7?

15 Feb 2004, CAT 2003 Re-test, Q66

- | | |
|---------|---------|
| (A) 666 | (B) 676 |
| (C) 683 | (D) 777 |
-

9. What is the remainder when 4^{96} is divided by 6?

15 Feb 2004, CAT 2003 Re-test, Q73

- | | |
|-------|-------|
| (A) 0 | (B) 2 |
| (C) 3 | (D) 4 |
-

CAT 2002 - Questions 10-11

10. When 2^{256} is divided by 17, the remainder would be

CAT 2002, Q77

- | | |
|--------|-------------------|
| (A) 1 | (B) 16 |
| (C) 14 | (D) None of these |
-

11. After the division of a number successively by 3, 4 and 7, the remainders obtained are 2, 1 and 4 respectively. What will be the remainder if 84 divides the same number?

CAT 2002, Q81

- | | |
|--------|--------|
| (A) 80 | (B) 75 |
| (C) 41 | (D) 53 |
-

CAT 2000 - Questions 12-13

12. Let $N = 1421 * 1423 * 1425$. What is the remainder when N is divided by 12?

CAT 2000, Q68

- | | |
|-------|-------|
| (A) 0 | (B) 9 |
| (C) 3 | (D) 6 |
-

13. The integers 34041 and 32506 when divided by a three-digit integer n leave the same remainder. What is n ?

CAT 2000, Q69

- | | |
|---------|---------|
| (A) 289 | (B) 367 |
| (C) 453 | (D) 307 |
-

14. The remainder when 7^{84} is divided by 342 is :

CAT 1999, Q58

(A) 0

(B) 1

(C) 49

(D) 341

CAT 1998 - Questions 15-17

15. A certain number, when divided by 899, leaves a remainder 63. Find the remainder when the same number is divided by 29.

CAT 1998, Q73

- | | |
|-------|--------------------------|
| (A) 5 | (B) 4 |
| (C) 1 | (D) Cannot be determined |
-

16. A is the set of positive integers such that when divided by 2, 3, 4, 5, 6 leaves the remainders 1, 2, 3, 4, 5 respectively. How many integers between 0 and 100 belong to set A?

CAT 1998, Q74

- | | |
|-------|-------------------|
| (A) 0 | (B) 1 |
| (C) 2 | (D) None of these |
-

17. A number is formed by writing first 54 natural numbers next to each other as 12345678910111213 ... Find the remainder when this number is divided by 8.

CAT 1998, Q94

- | | |
|-------|-------|
| (A) 1 | (B) 7 |
| (C) 2 | (D) 0 |
-

CAT 1991 - Questions 18-18

18. Let k be a positive integer such that $k+4$ is divisible by 7. Then the smallest positive integer n , greater than 2, such that $k+2n$ is divisible by 7 equals

CAT 1991, Q86

(A) 9

(B) 7

(C) 5

(D) 3

CAT 1990 - Questions 19-19

19. The remainder when 2^{60} is divided by 5 equals

CAT 1990, Q12

(A) 0

(B) 1

(C) 2

(D) None of these

- End of PYQ Collection -
