



September Sprint for CAT 2025

Class 17

Series and Progressions

Logarithms



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September Sprint Schedule

Date	Topic	Date	Topic	Date	Topic
01-Sep	Number System - 1	11-Sep	Games and Tournament	21-Sep	Algebra - 3
02-Sep	Arrangement	12-Sep	Odd One Out	22-Sep	Logical DI
03-Sep	Number System - 2	13-Sep	Chart Based DI - 3	23-Sep	Geometry - 1
04-Sep	Para Completion	14-Sep	Arithmetic - 4	24-Sep	Reading Comprehension - 3
05-Sep	Arithmetic - 1	15-Sep	Venn Diagram	25-Sep	Geometry - 2
06-Sep	Chart Based DI - 1	16-Sep	Reading Comprehension - 2	26-Sep	Quantitative Reasoning
07-Sep	Arithmetic - 2	17-Sep	Algebra - 1	27-Sep	Geometry - 3
08-Sep	Reading Comprehension - 1	18-Sep	Routes and Network	28-Sep	Parajumbles
09-Sep	Chart Based DI - 2	19-Sep	Algebra - 2	29-Sep	Misc. LR topics
10-Sep	Arithmetic - 3	20-Sep	Para Summary	30-Sep	Modern Maths





Preparing for MBA exams for 2025-26?



- Recorded concept videos
- Solved questions – basic to advanced
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- In LR, OMET topics covered

Price: **15000/-**

Section-wise modules are also available



Raghu borrowed some money from his friend Akash to admit his daughter to a reputed B-School. He agreed to pay the interest-free loan of ₹ 6,00,000 in a monthly installment which increased by a constant amount. After the 20th installment, he found that he had paid $\frac{3}{4}$ of the loan. If the entire loan was cleared in 25 installments, find out the value of the first installment.

- A. ₹ 15600
- B. ₹ 13680
- C. ₹ 16800
- D. ₹ 19840



The sum of $2n$ terms of A.P. $\{1, 5, 9, 13, \dots\}$ is greater than the sum of n terms of A.P. $= \{56, 58, 60, \dots\}$. What is the smallest value n can take?



Let the first term and the common ratio of a geometric progression be positive integers. If the sum of squares of its first three terms is 33033, then what is the sum of these three terms?



Find the sum of the infinite series:

$$1 + \frac{3}{4} + \frac{5}{16} + \frac{7}{64} + \frac{9}{256} + \dots$$

- A. $\frac{8}{3}$
- B. $\frac{20}{9}$
- C. $\frac{35}{16}$
- D. $\frac{25}{12}$



If the sum to infinity of the series $1 + 4x + 7x^2 + 10x^3 \dots$ is $35/16$, find the value of x .

- A. $1/5$
- B. $1/6$
- C. $1/8$
- D. $2/15$



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If a, b, c, d are in H.P., then $ab + bc + cd$ is equal to

- A. $3ad$
- B. $(a+b)(c+d)$
- C. $3ac$
- D. $2(a+d)$



A geometric progression has 6 terms. The first term is 192 and the common ratio is 1.5. An arithmetic progression has 21 terms and a common difference of 1.5. Given that the sum of all the terms in the geometric progression is equal to the sum of all the terms in the arithmetic progression, find the first term of the arithmetic progression.



If a , b , and c are three distinct real numbers in GP and $a + b + c = xb$, then x cannot be

- A. 2
- B. -2
- C. -3
- D. 4



If $33^a = 11^b = 81$, what is the value of $1/a - 1/b$?

- A. $1/2$
- B. $1/3$
- C. $1/4$
- D. $1/11$



$4^{3+6+9+12+\dots+3x} = (0.0625)^{-117}$, what is the value of x ?



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SRCC GBO 2026: 5 Mocks

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CAT and OMETs Mocks by MBA Karo



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If $\log 13 = 1.114$ and $\log 3 = 0.477$, how many digits are there in 351^{24} ?

- A. 61
- B. 62
- C. 63
- D. 64



The value of $(\log_7 70)^{-1} + (\log_4 4900)^{-1} + (\log_5 70)^{-1}$ is

- A. 0.5
- B. 1
- C. 2
- D. 70



$\log_9 (3\log_2 (1 + \log_3 (1 + 2\log_2 x))) = 1/2$. Find x.

A. $1/2$

B. 1

C. 2

D. 4



If $(\log_5 x)(\log_x 3x)(\log_{3x} y) = \log_x x^3$, find the value of y .

- A. $5/3$
- B. 27
- C. 125
- D. 243



Let x and y be positive real numbers such that $\log_5(x + y) + \log_5(x - y) = 3$, and $\log_2 y - \log_2 x = 1 - \log_2 3$. Then xy equals

- A. 25
- B. 150
- C. 250
- D. 100



If x, y, z are positive real numbers such that $x^{12} = y^{16} = z^{24}$, and the three quantities $3 \log_y x, 4 \log_z y, n \log_x z$ are in arithmetic progression, then the value of n is



Given: $\log_a [\log_b (\sqrt{c} + \sqrt{d})] = 0$, where $a < b < c < d$ are positive integers. What is the least value of b ?



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Sequence P is defined by $p_n = p_{n-1} + 3$, $p_1 = 11$, Sequence Q is defined as $q_n = q_{n-1} - 4$, $q_3 = 103$. If $p_k > q_{k+2}$, what is the smallest value k can take?

Let a, b, and c be the 7th, 11th, and 13th terms respectively of a non-constant A.P. If these are also three consecutive terms of a G.P., then a/c is equal to

- A. $\frac{1}{2}$ B. 4 C. $\frac{13}{7}$ D. $\frac{3}{5}$

If $\log 2 = 0.301$ and $\log 7 = 0.845$, find the value of $\log 175$

- A. 2.243 B. 2.544 C. 2.155 D. 2.456

If $\log_{12} 27 = a$, $\log_9 16 = b$, find $\log_8 108$.

- A. $\frac{2(a+3)}{3b}$ B. $\frac{2(a+3)}{3a}$ C. $\frac{2(b+3)}{3a}$ D. $\frac{2(b+3)}{3b}$

Answer in Comments



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Thank You