Skillshort

Self-Study Preparation Pack

CMA FOUNDATION

Paper 3: Fundamentals of Business Mathematics and Statistics (FBMS)

Last-Week Plan, Formula Sheet & Exam Strategy

Exam on Sunday 13 December 2026, 2:00–4:00 pm (Papers 3 and 4) · 7-day plan · formula sheet · exam-hall plan

7 days | 3 mocks | No negative marking

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This subject pack has 6 parts

1 Chapter-wise notes
2 Important topics & weightage
3 Past papers: trends & links
4 Mock tests + solutions
5 Chapter practice questions
6 Last-week plan & strategy

Prepared by Skillshort for self-study. Original explanations and questions; not an official ICAI/ICMAI/ICSI publication. Items marked VERIFY should be checked against the latest official material.

7-day revision plan

Day	Morning (2.5 h)	Afternoon (2.5 h)	Evening (1.5 h)
7	Modules 1–2 formulas + practice sets	Module 3 + Module 4	Formula sheet
6	Module 5 (averages, dispersion)	Modules 6–7	Practice sets 5–7
5	Module 8	**Mock Test 1** + analysis	Mistake log
4	Paper 4 revision (same session)	Redo wrong numericals	Formula sheet
3	**Mock Test 2** + analysis	Weak modules from file 05	Calculator drill
2	**Mock Test 3** + analysis	ICMAI June 2026 paper (file 03 link)	Formula sheet
1	Formula sheet only	Paper 4 one-liners	Sleep early

Formula sheet – Business Mathematics

Topic	Formula
Proportion	Mean proportional $\sqrt{(ab)}$; third b^2/a; fourth bc/a
Variation	Direct $y = kx$; inverse $xy = k$; joint $z = kxy$
Simple interest	$SI = PRT/100$; $A = P(1 + RT/100)$
Compound interest	$A = P(1 + r)^n$; CI − SI (2 yrs) = $P(r)^2$; effective rate $(1 + r/k)^k - 1$
Annuity (end of year)	$FV = A[(1 + i)^n - 1]/i$; $PV = A[1 - (1 + i)^{-n}]/i$; annuity due × $(1 + i)$
AP	$t_n = a + (n - 1)d$; $S_n = n/2[2a + (n - 1)d]$
GP	$t_n = ar^{n-1}$; $S_n = a(r^n - 1)/(r - 1)$; $S\infty = a/(1 - r)$
Time & distance	Average speed (equal distances) $2xy/(x + y)$; km/h × 5/18 = m/s
Sets	$n(A \cup B) = n(A) + n(B) - n(A \cap B)$; subsets 2^n
Logs	$\log mn = \log m + \log n$; $\log m^n = n \log m$; $\log_a b = \log b/\log a$
P & C	${}^nP_r = n!/(n - r)!$; ${}^nC_r = n!/[r!(n - r)!]$; circular $(n - 1)!$; necklace $(n - 1)!/2$
Quadratic	Sum $-b/a$; product c/a; $D = b^2 - 4ac$
Calculus	$MC = dC/dx$; max/min: $f' = 0$, check f''; min AC where AC = MC

Formula sheet – Statistics

Topic	Formula
Pie chart	Angle = value/total × 360°
Averages	Combined mean $(n_1\bar{x}_1 + n_2\bar{x}_2)/(n_1 + n_2)$; Mode = 3 Median − 2 Mean
Dispersion	QD = $(Q_3 - Q_1)/2$; coeff. QD = $(Q_3 - Q_1)/(Q_3 + Q_1)$; CV = $\sigma/\bar{x} \times 100$; SD of 2 numbers = half their difference; variance of 1…n = $(n^2 - 1)/12$
Correlation	$r = \pm\sqrt{(b_{yx} \cdot b_{xy})}$; $R = 1 - 6\Sigma d^2/[n(n^2 - 1)]$
Regression	$y - \bar{y} = b_{yx}(x - \bar{x})$; lines meet at $(\bar{x}, \bar{y})$
Probability	$P(A \cup B) = P(A) + P(B) - P(A \cap B)$; independent $P(A)P(B)$; $P(A/B) = P(A \cap B)/P(B)$; odds m : n → m/(m + n)
Index numbers	Laspeyres $\Sigma p_1q_0/\Sigma p_0q_0 \times 100$; Paasche $\Sigma p_1q_1/\Sigma p_0q_1 \times 100$; Fisher $\sqrt{(L \times P)}$; real wage = money wage/CPI × 100
Time series	3-yearly MA = $(a + b + c)/3$; weighted $(w_1a + w_2b + w_3c)/\Sigma w$

Exam-hall strategy

Time	Action
First 20 minutes	Section II concept questions and one-step numericals

Time	Action
Next 30 minutes	Section I numericals; use options to check (substitute in equations)
Last 10 minutes	Fill every bubble (no negative marking) and check the booklet series

STRATEGY Rules that save marks

- Solve before looking at the options – distractors are the common mistakes (simple average, wrong weights).
- Use substitution for equations and logs: put each option back into the question.