Atomi SACE Maths Methods Study Plan

EXAM DATE: 01 NOV 2021

Revision (5–6 weeks from exam)

Session	Topic	Subtopic	Important Lessons	Done
1	**Stage 1 Mathematics Revision**	Student Can Elect Relevant Areas for Revision		○
2	**Stage 1 Mathematics Revision**	Student Can Elect Relevant Areas for Revision		○
3	**Topic 1: Further Differentiation and Applications**	Introductory Differential Calculus	Equations of Tangents and Normals to a Curve	○
		Differentiation Rules	Differentiation Rules - Practise Question	○
		Exponential Functions	Differentiating Non-E Exponential Functions	○
		Trigonometric Functions	Differentiating Trigonometric Functions From First Principles	○
		The Second Derivative	Harder Exam-Style Differentiation Practice (Part 1) and (Part 2)	○
4	**Topic 2: Discrete Random Variables**	Discrete Random Variables	Properties of Discrete Random Variables	○
		The Bernoulli Distribution	Bernoulli Random Variables	○
		Repeated Bernoulli Trials and the Binomial Distribution	Binomial Distribution - Exam Application (Part 1) and (Part 2)	○
5	**Topic 3: Integral Calculus**	Anti-Differentiation	Reverse Chain Rule	○
		The Area Under Curves	Area Between Two Curves, Areas About the Y-Axis	○
		Fundamental Theorem of Calculus		○
		Applications of Integration		○
6	**Topic 4: Logarithmic Functions**	Using Logarithms for Solving Exponential Equations	Logarithmic Laws	○
		Logarithmic Functions and Their Graphs		○
		Calculus of Logarithmic Functions	Integrating to the Natural Logarithm, Exam Style Question on Exponentials and Logarithms	○
7	**Topic 5: Continuous Random Variables and the Normal Distribution**	Continuous Random Variables	Properties of Continuous Random Variables	○
		Normal Distributions	Probability of Observing a Value Less or Greater Than a Given Score, Probability of Observing a Value Between Two Scores	○
		Sampling	The Normal Approximation for the Sample Proportion	○
8	**Topic 6: Sampling and Confidence Intervals**	Confidence Intervals for a Population Mean	Calculating and Interpreting a Confidence Intervals for an Unknown Population Mean	○
		Population Proportions	Using the Normal Approximation for the Sample Proportion	○
		Confidence Intervals for a Population Proportion		○

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Practice (3–4 weeks from exam)

Session	Topic	Subtopic	Confidence	Done
9	**Topic 1: Further Differentiation and Applications**	Introductory Differential Calculus	○ ○ ○ ○ ○	○
		Differentiation Rules	○ ○ ○ ○ ○	○
10		Exponential Functions	○ ○ ○ ○ ○	○
		Trigonometric Functions	○ ○ ○ ○ ○	○
		The Second Derivative	○ ○ ○ ○ ○	○
11	**Topic 2: Discrete Random Variables**	Discrete Random Variables	○ ○ ○ ○ ○	○
		The Bernoulli Distribution	○ ○ ○ ○ ○	○
		Repeated Bernoulli Trials and the Binomial Distribution	○ ○ ○ ○ ○	○
12	**Topic 3: Integral Calculus**	Anti-Differentiation	○ ○ ○ ○ ○	○
		The Area Under Curves	○ ○ ○ ○ ○	○
		Fundamental Theorem of Calculus	○ ○ ○ ○ ○	○
		Applications of Integration	○ ○ ○ ○ ○	○
13	**Topic 4: Logarithmic Functions**	Using Logarithms for Solving Exponential Equations	○ ○ ○ ○ ○	○
		Logarithmic Functions and Their Graphs	○ ○ ○ ○ ○	○
		Calculus of Logarithmic Functions	○ ○ ○ ○ ○	○
14	**Topic 5: Continuous Random Variables and the Normal Distribution**	Continuous Random Variables	○ ○ ○ ○ ○	○
15		Normal Distributions	○ ○ ○ ○ ○	○
		Sampling	○ ○ ○ ○ ○	○
16	**Topic 6: Sampling and Confidence Intervals**	Confidence Intervals for a Population Mean	○ ○ ○ ○ ○	○
		Population Proportions	○ ○ ○ ○ ○	○
		Confidence Intervals for a Population Proportion	○ ○ ○ ○ ○	○