GURU AT HOME
PERFECT TUTOR WITH EASE

MATHEMATICS

Grade 12 mathematics –

Algebra:
Understanding and using advanced properties of algebraic expressions, including partial fractions and infinite series
Understanding and using advanced properties of polynomial and rational functions
Understanding and using advanced properties of logarithmic and exponential functions

Functions:
Understanding and analyzing the properties of inverse trigonometric functions
Understanding and using the properties of hyperbolic and inverse hyperbolic functions
Understanding and using the properties of advanced functions, including elliptic functions and gamma functions

Geometry:
Understanding and using the properties of advanced geometric figures, including fractals and non-Euclidean geometries
Understanding and using advanced topics in coordinate geometry, including conic sections and polar coordinates
Understanding and using advanced topics in vector and matrix algebra

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MATHEMATICS

Grade 12 mathematics –

Mathematical Practices:
Developing effective problem-solving strategies and applying them to real-world and mathematical problems
Developing effective communication and collaboration skills
Developing effective critical thinking and reasoning skills

Calculus:
Understanding and using advanced topics in differential calculus, including optimization and related rates
Understanding and using advanced topics in integral calculus, including volumes of revolution and arc length
Understanding and using advanced topics in multivariable calculus, including partial derivatives and multiple integrals

Algebra:
Understanding and using advanced topics in complex numbers, including roots of unity and complex analysis
Understanding and using advanced topics in number theory, including modular arithmetic and Diophantine equations
Understanding and using advanced topics in group theory and abstract algebra, including subgroups and homomorphisms

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MATHEMATICS

Grade 12 mathematics –

Geometry:
Understanding and using advanced topics in topology, including connectedness and compactness
Understanding and using advanced topics in differential geometry, including curvature and geodesics
Understanding and using advanced topics in projective geometry, including cross ratios and duality

Statistics and Probability:
Understanding and using advanced topics in probability theory, including stochastic processes and random variables
Understanding and using advanced topics in statistical modeling, including hierarchical models and Bayesian statistics
Understanding and using advanced topics in machine learning and data science, including classification and clustering algorithms

Mathematical Practices:
Developing effective problem-solving strategies and applying them to real-world and mathematical problems
Developing effective communication and collaboration skills
Developing effective critical thinking and reasoning skills