

The mathematics examination measures basic mathematical knowledge, thinking, and problem-solving skills.

ISET's mathematics exam will consist of two sections.

Part 1 is similar to quantitative section of GRE General Test. Part 1 tests your basic mathematical abilities.

Part 2 is similar to GRE Mathematics Subject test. Part 2 tests your specific mathematical knowledge. (More information about these tests, as well as practice questions, can be found at www.ets.org.)

You will have one hour to complete each section of the exam. All questions will be multiple choice format. The mathematics exams will be conducted in English.

The following topics may be addressed on the exams:

Arithmetic

Questions may involve arithmetic operations, powers, operations on radical expressions, estimation, percent, absolute value, properties of integers (e.g., divisibility, factoring, prime numbers, odd and even integers), and the number line.

Algebra

Questions may involve rules of exponents, factoring and simplifying algebraic expressions, understanding concepts of relations and functions, equations and inequalities, solving linear and quadratic equations and inequalities, solving simultaneous equations, setting up equations to solve word problems, coordinate geometry, including slope, intercepts, and graphs of equations and inequalities, and applying basic algebra skills to solve problems.

Geometry

Questions may involve parallel lines, circles, triangles, rectangles, other polygons, area, perimeter, volume of 3 dimensional bodies, the Pythagorean Theorem, and angle measure in degrees.

Linear Algebra

Questions may involve Matrix algebra, systems of linear equations, vector spaces, vector algebra (dimensions ≤ 3).

Calculus

Questions may involve Elementary functions and their graphs (linear, polynomial, rational, exponential, logarithmic, trigonometric), limits, continuity, derivative, differentiation techniques, increasing and decreasing, minima and maxima, asymptotes, sketching graphs.

Additional Topics

Questions may involve Sequences and series of numbers, arithmetic and geometric progressions, interest rates, simple and compound interests, operations of union and intersection of sets, elementary probability, basic descriptive statistics (mean, median, mode, range), interpretation of data in graphs and tables (line graphs, bar graphs, circle graphs, frequency distributions).