

Science, Mathematics & Engineering

Scholarship Exam Descriptions



Students will have 20 minutes to complete the math test and 15 minutes to complete the other subject tests that they have elected to complete. All exams are multiple choice.

Mathematics:

The mathematics exam focuses primarily on problem solving which incorporates basic high school math principles including algebra, geometry, trigonometry, probability and logic.

Geology:

The geology subject test covers topics typically introduced in an Earth Sciences class including common rock types and rock-forming minerals, plate tectonics, surface processes, natural hazards and atmospheric processes.

Biology:

The biology subject test covers fundamental biology topics that are typically covered in high school biology and advanced biology (such as AP Biology) including but not limited to cellular structure and metabolism, transmission and molecular genetics, evolution and ecology.

Chemistry:

The chemistry subject test covers topics typically introduced in an first-year high school general chemistry sequence, including but not limited to: naming chemical compounds, writing and interpreting chemical formulas and balanced chemical equations, unit conversions, stoichiometric calculations, acid-base chemistry, atomic structure, thermochemistry, equilibrium and kinetics.

Physics:

The physics test emphasizes concepts from introductory Newtonian mechanics. Calculations may require knowledge of Newton's Laws of Motion, Newton's Law of Gravity, gravitational potential energy, kinetic energy and mechanical work.

Computer Science:

The computer science subject test covers basic computational thinking, quantitative reasoning and discrete mathematics concepts. The questions are programming language independent.