GRE 101: Strategies for Success
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16-17
I. INTRODUCTION
• Test-taker at UWRF in 1979
• Testing supervisor Purdue University
• Test item author

II. UNDERGRADUATE PREPARATION
• coursework, grades, research/scholarly experience, internship/applied experience, departmental involvement, leadership/service experience

III. GRADUATE SCHOOL PROGRAM TYPES AND THE LIKELIHOOD OF NEEDING THE GRE
• Masters level – somewhat likely
• Doctorate level – highly likely
• Professional schools (e.g., medical, law) – very unlikely
  *Many professional schools require alternate standardized tests like the Law School Admissions Test (LSAT) or the Medical College Admissions Test (MCAT)
IV. GRE In A Nutshell

• What is the GRE (simple)?
  Graduate Record Exam - Educational Testing Service (ETS) standardized test for graduate school admission (details at http://www.ets.org/gre/)

• What are the GREs (Complex: General vs Subject Test)?
  GENERAL TEST (taken by all - regardless of discipline and comprised of 3 subtests)

  VERBAL REASONING (V) subtest – 2 sections with approximately 20 questions/30 minutes each (recognize relationships between words, analyze and evaluate written materials using analogies, sentence completion, reading comprehension)

  QUANTITATIVE REASONING (Q) subtest – 2 sections with approximately 20 questions/35 minutes each (understand quantitative information, interpret and analyze quantitative information, solve problems using mathematical models apply basic mathematical skills and elementary mathematical concepts of arithmetic, algebra, geometry, probability and statistics)
Policymakers must confront the dilemma that fossil fuels continue to be an indispensable source of energy even though burning them produces atmospheric accumulations of carbon dioxide that increase the likelihood of potentially disastrous global climate change. Currently, technology that would capture carbon dioxide emitted by power plants and sequester it harmlessly underground or undersea instead of releasing it into the atmosphere might double the cost of generating electricity. But because sequestration does not affect the cost of electricity transmission and distribution, delivered prices will rise less, by no more than 50 percent. Research into better technologies for capturing carbon dioxide will undoubtedly lead to lowered costs.
• **ANALYTICAL WRITING (AW) subtest** – 1 section with 2 separately timed 30 minute writing tasks

  "Analyze an Issue" and "Analyze an Argument." NO CHOICE OF TOPICS!

  Articulate complex ideas clearly and effectively, support ideas with relevant reasons/examples, examine claims and accompanying evidence, sustain a well-focused discussion, controlling the elements of standard written English.

  • *Governments should not fund any scientific research whose consequences are unclear.

  • Write a response in which you discuss your views on the policy and explain your reasoning for the position you take. In developing and supporting your position, you should consider the possible consequences of implementing the policy and explain how these consequences shape your position.

  • *As people rely more and more on technology to solve problems, the ability of humans to think for themselves will surely deteriorate.

  • Write a response in which you discuss the extent to which you agree or disagree with the statement and explain your reasoning for the position you take. In developing and supporting your position, you should consider ways in which the statement might or might not hold true and explain how these considerations shape your position.

  • *Hints/notes: Outline **BEFORE** you write! All material is typed (software does not have spell or grammar check)
• **RESEARCH section** – # of items varies/time varies (is either a third Verbal or Quantitative section)

• **UNSCORED section** – # of items varies/time varies, always after analytical section

• **Characteristics of the GENERAL TEST**
  - Can change answers within a section/intuitive scoring
  - On-screen calculator for Quantitative Reasoning sections
  - Less vocabulary but more reading
  - Answer types: Multiple choice 1 answer; Multiple Choice 1 or more choices; Select-in-passage; Text Completion (fill-in-the-blank); Sentence Equivalence; Numeric entry, Quantitative Comparison (greater than, less than, equal to, cannot be determined); Data/Chart Interpretation
  - The general test is designed with a min-max score range from 130-170 points (1 point increments) for the Verbal and Quantitative sections and a 0-6 point scale (.5 increments) on the writing section
  - Computer-based at test centers - year-round - cost $205 in U.S.
  - Scores generated at end of exam with several reporting options
    - On test day ALL vs MOST RECENT get immediate score and free copies to 4 institutions)
    - After day of test ALL, MOST RECENT, ANY (past 5 years)
    - ($27 per additional scores)
• **SUBJECT TEST** (taken by some - seeking admission to graduate programs)
  • Disciplinary areas - *Biochemistry, Cell and Molecular Biology; Biology; Chemistry; Literature in English; Mathematics; Physics; Psychology*

• **Physics Subject Test** - *(100 items)* across the following categories:
  • **Classical Mechanics 20%** = Newton’s laws, dynamics of systems particles, kinematics, elementary topics in fluid dynamics, Lagrangian and Hamiltonian formalism, central forces & celestial mechanics
  • **Electromagnetism 18%** = electrostatics, currents and DC circuits, Lorentz force, Maxwell’s equations & applications, AC currents, magnetic & electric fields
  • **Optics and Wave Phenomena 9%** = wave properties, superposition, geometrical optics, polarization, Doppler effect
  • **Thermodynamics and Statistical Mechanics 10%** = laws of thermodynamics, ideal gases, concepts & calculation of thermodynamics, thermal expansion
  • **Quantum Mechanics 12%** = solutions of Schrodinger equation (including square wells, harmonic oscillators, and hydrogen atoms), spin, angular momentum
  • **Atomic Physics 10%** = properties of electrons, Bohr model, atomic structure & spectrum, black-body radiation, atoms in electric and magnetic fields
  • **Special Relativity 6%** = time dilation, length construction, Lorentz transform
  • **Laboratory Methods 6%** = data & analysis error, radiation detection, interaction of charged particles with lesser matter, lasers & optical interferometers, applications of probability & statistics
  • **Specialized Topics: Nuclear and Particle Physics 9%** radioactive decay, fission & fusion, condensed matter, semiconductors, superconductors, astrophysics
• **Psychology Subject Test** - 205 items across the following categories:
  - **Experimental** 40% = learning, cognition, sensation, perception, physiology, ethology/comparative
  - **Social/social science** 43% = clinical, abnormal, personality, developmental, social
  - **General (other)** 17% = history, applied, statistics, measurement, methodology
  - *Possible addition of subtest scores*

• **Characteristics of the SUBJECT TEST**
  - Cost - $150 world-wide
  - Subject test score range is from 200-990 (10 point increments)
  - Time limit = 2 hours and 50 minutes
  - 3 TEST DATES: Sept, Oct, Apr (check for specific date)
  - *Free practice books are available through GRE website*
Key GRE Questions and Answers

- **Should I take the GRE(s)?**
  - The need to take the GRE general and subject tests varies by discipline, school, and level of degree sought
  - In many disciplines the **General** GRE is recommended for many Master degree level programs and is require for PhD and PsyD programs.
  - The Subject test is rarely required for Master’s programs and is also not commonly required for doctoral level programs

- **How important is the GRE?**
  - Varies all the way from irrelevant it to #1 determinant for admission
  - General rule of thumb = higher GRE scores are needed for those seeking 1) admission to prestigious school, 2) highest terminal degree (i.e., PhD, Ed D, PsyD), and 3) free financial support
• Why is the GRE so important?
  • By providing the same standard test to all students graduate schools can more easily compare students graduating from diverse backgrounds (i.e., UWRF, CSM, UCB)
  • Measurement data indicates that the GRE is a fairly good predictor of first year graduate performance, especially at the doctoral level

• When should I take the test?
  • Test taking is typically done during the fall or winter of the year you will graduate
  • Timing is dependent upon schools application deadline (PhD level schools often in December/January, Master’s degree later spring or rolling)
  • If planning to take a year or two off from college before entering graduate school - take GRE during final semester of college or shortly after graduation when still in “test taking” mode

• Can I prepare for the GRE?
  • The best preparation involves life-long learning of English (i.e., reading), math, and problem solving
  • Enhancement of skills can be accomplished by: taking math and English courses in college, using free POWERPREP taking on-line writing section practice essays available at cost a GRE site and other pay-per-view option.
  • Preparation both increases knowledge and test familiarity
  • Earnest preparation should begin during junior year of college (if possible)
• **What is a good score?**
  - The current system generates a score between 130 and 170 (1-point increments) with a mean score around 150 and a standard deviation around 8.5. Actual scores/percentile ranks used in decisions will vary by school and level of education (e.g., PhD much higher than Master’s).
  - General rule of thumb (top quartile 75th percentile – apply anywhere and may be competitive, second quartile – some PHD, all masters, third, some masters, bottom quartile – job). Quartile markers and percentile ranks vary by subtest (verb, quant).
  - The AW section is being scored on a 6-point holistic scale in half point increments (school’s criteria are yet to be determined).

• **What if I don’t do well?**
  - NEVER GO IN UNPREPARED! It is monetarily and academically costly!
  - If your scores are not what is needed or desired you have options:
    - 1. Retake test - but only after more intense preparation (must wait 21 days to retake test). New rule allows you to only send specific scores (e.g., most recent) – retake trap ($ and reliability)
    - 2) Revise list of schools/programs - looking for those in your GPA and GRE range (*Rule of 3’s*)
    - 3) Alter goals educational goals - A doctorate and/or masters level education is not for everyone (either academically or career wise). A lower GRE score may mean the need to reconsider your career and academic options in a more realistic manner.

• **Any questions?**