Strategies for Taking the ACT Mathematics Test

- Pace yourself.
- Answer all the easy questions first, and then go back to the more difficult ones.
- Use your favorite calculator -- but only when needed.
- Answer all questions.
- Read each problem carefully; reread the question that is asked.
- Look for information in the options.
- Use figures, sketches, tables, etc. wisely and whenever you can.
- Use your calculator wisely.
- Think!
- Use a number like "1" or "2" when comparing expressions.
- Don't use a number that makes the denominator of a rational expression equal to 0.
- Show your work in case you have to return to a problem.
- Check your work.

Practice Math Tests: pages 164, 304, 450, 588, 732
Answers with Explanations: pages 235, 378, 519, 661, 803
Scoring Keys: 875, 888, 899, 910, 921

I. **Scoring Your Practice Test**
 A. Number of correct answers – raw score
 B. Scale scores – use the conversion tables provided

II. **Reviewing Your Performance on the Practice Tests**
 A. *Did you run out of time?*
 B. *Did you spend too much time trying to understand the directions for the tests?*
 C. *Review the questions you missed. What TYPE of error was it?*
 D. *Did a particular type of question confuse you?*

***"Types of Questions on the ACT Mathematics Test" begins on page 51. Read through these pages.**

The Real ACT Prep Guide
A Brief Summary of the Book

I. About the ACT
 A. Registering for the ACT
 B. Correct ID, Registration ticket, what else to bring

II. General Test-Taking Strategies
 A. Getting Ready
 B. Mental Prep
  1. Get organized
  2. Keep the test in perspective
  3. Learn as much as you can about the ACT
  4. Refresh your knowledge and skills in the content areas
  5. Identify the content areas you have not studied
  6. Plan your study time
  7. Develop a positive mental attitude
 C. Physical Prep
  1. Exercise
  2. Diet
  3. Rest
 D. Test-Taking Strategies
  1. Take a practice test
  2. Learn to pace yourself
  3. Know the directions and understand the answer document
  4. Read carefully and thoroughly
  5. Mark your answer document carefully
  6. Decide on strategies for answering easier and harder questions
  7. Decide on a strategy for guessing on multiple-choice questions
  8. Decide on a strategy for changing your answer
  9. Plan to check your work
  10. Have a panic strategy
  11. Write notes in your test booklet if allowed

III. Test Format and Content

    A. ACT English Test--75 questions, 45 minutes

    B. ACT Mathematics Test—60 questions, 60 minutes

Content Area	Percent of Test	Number of Questions
Pre-Algebra	21%	14
Elementary Algebra	17%	10
Intermediate Algebra	15%	9
Coordinate Geometry	15%	9
Plane Geometry	23%	14
Trigonometry	7%	4
Total	**100%**	**60**

Scores reported:
- Total Mathematics Test score based on all 60 questions
- Pre-Algebra/Elementary Algebra subscore based on 24 questions
- Intermediate Algebra/Coordinate Geometry subscore based on 18 questions
- Plane Geometry/Trigonometry subscore based on 18 questions

1. Pre-Algebra
   a. Using whole numbers, fractions, decimals and integers
   b. Numbers raised to positive integer powers
   c. Square roots
   d. Absolute value
   e. Ordering numbers
   f. Linear equations with one variable
   g. Simple probability and counting principles
   h. Representing and interpreting data in charts, tables, graphs
   i. Descriptive statistics like mean, median, mode
2. Elementary Algebra
   a. Using variables to express relationships
   b. Substituting the value of a variable in an expression
   c. Performing basic operations on polynomials
   d. Factoring polynomials
   e. Solving simple quadratic equations
   f. Solving linear inequalities with one variable
   g. Applying properties of integer exponents and square roots

3. Intermediate Algebra
   a. Quadratic formula
   b. Radical and rational expressions
   c. Inequalities and absolute value equations
   d. Sequences
   e. Systems of equations
   f. Quadratics inequalities
   g. Functions
   h. Matrices
   i. Roots of polynomial functions
   j. Complex numbers
4. Coordinate Geometry
   a. Real number line
   b. Standard coordinate plane
   c. Number line graphs
   d. Graphs of points, lines, polynomials, circles and other curves
   e. Relationship between equations and graphs
   f. Slope
   g. Parallel and perpendicular lines
   h. Distance
   i. Midpoints
   j. Transformations
   k. Conics
5. Plane Geometry
   a. Properties and relations of plane figures (polygons and circles)
   b. Properties and relations of angles, parallel lines, perpendicular lines
   c. Transformations (translations, rotations, reflections)
   d. Proof techniques
   e. Three-dimensional geometry
   f. Measurement (perimeter, circumference, area, volume)
   g. Justification, proof, and logical conclusions
6. Trigonometry
   a. Trigonometric ratios for right triangles
   b. Values, properties, and graphs of trig functions
   c. Trigonometric identities
   d. Trigonometric equations
   e. Modeling with trigonometric functions