

HOW TO PRACTICE AND BASIC STRATEGIES FOR THE ACT MATH SECTION

Half of the ACT math section uses up to Freshman Algebra level math. The problems are conceived using basic math knowledge in a contrived and challenging context. You are tested on applying specific math skills, using math reasoning skills and your ability to apply the appropriate math knowledge. Most test takers score less than 75% correct.

When doing practice tests, give yourself exactly one hour to finish the exam. Do not do one question at a time and then check the answer to see if you got it right. By correcting yourself only after you have finished the entire test, you will gain a sense of time and learn how to pace yourself. You will know where you are having trouble and discover your strengths and weaknesses. Knowledge of your self is just as important as knowledge of math. Practice so you can identify and enhance your strengths as well as to detect and correct your weaknesses.

Use G.U.A.R.D. as basic strategy.

Glance at the answers for clues.

Use all figures, givens and inputs

Answer every question

Read the problem and make sure you understand the question and what it's asking.

Draw a diagram if none available.

Other key strategies include:

- 1) Answer the easy questions using as little time as possible. The questions get increasingly difficult. The ones after about question 35 or 40 are usually the most challenging. Spend less than one minute per question on the first 20-25 questions. This will give you more time on the more complex ones.
- 2) You get the same credit for answering an easy question correctly as you do for a difficult question. Put your effort on answering those questions that you have a high probability of getting right. However, answer all questions even if you're guessing.
- 3) Budget your time and pace yourself. **Avoid being stubborn with one question.** Do not get caught in the trap of working on a time-consuming, frustration problem. Skip it and move on. Choose 50 questions that you can reasonably get 80% correct and you will score about 24 on the math section.
- 4) Determine what math concept the question is targeting. If you're not confident with the specific math area, take your best guess and move on.
- 5) Working backwards from answers is usually an inefficient way to solve the problems. Solve the problem first, and then match up your answer with the available choices. However, sometimes looking at the choices can give you a clue and help you solve the problem or see what form the answer should take. If you're stymied, it's OK to work

backwards from answers. If your answer is not one of the choices, don't panic. Do one of the following:

A) Do you really understand the problem? If you misunderstand the question, reread. **MAKE SURE YOU ANSWER THE QUESTION ASKED.**

B) You may have made a computational error. Quickly review your steps. Did you add when you should have multiplied? You may have made a simple mistake. If your search is extensive without results, guess. The time wasted is not worth it.

C) Your answer is equivalent to one of the choices so a conversion is necessary. The question may ask, "What percentage..." And your answer is a fraction. Check to see if you can change your answer into a different form, e.g. improper fraction to mixed number or fraction into a decimal.

6) If you are doing a lot of computational work on one problem, stop and think. Most ACT type questions rarely require extensive work. Two or even three steps are the usual maximum. Avoid long division. Factor instead. Plug and chug from answers.

7) When plugging in values to see if an expression is true, use easy numbers like -2, -1, 0, 1 and 2. To test theories and axioms use both positive and negative integers as well as fractions. Creating a number line can be useful when answering axiom questions.

8) For geometry questions without a diagram, draw one. For those with a diagram, don't assume it is drawn to scale. Just because angles, segments, etc. look the same doesn't mean they are. However, "line" means straight line. Pay close attention to givens and directions. For diagrams, indicate and label congruencies and other info. Use a question mark for the unknown that you're solving for

9) Some advise to mark the correct answer on your test booklet and then with 5 minutes left, you bubble in all the answers. Time is wasted moving back and forth from your answer sheet to test booklet.

10) If you don't remember or know the specific math knowledge needed, quickly think creatively with what you do know. The context of the question and the process of elimination are also good tactics. It may lead you to the correct solution. If not, make your best guess and move on to the next question.

11) The questions use basic knowledge in a challenging fashion. Reduce the complexity to simplicity by going back to basics. You need to analyze the problem and design a plan of attack to solve it. Make sure your answer makes logical sense.

12) Put the question in the form that you can understand. For story problems, cast yourself as the active problem solver. Imagine yourself being the one in the situation. Sometimes, you may have to read the problem twice to fully understand what's happening. Some story problems require you to set up an algebraic equation.

13) Make judicious use of your calculator. Sometimes it's easier to solve problems without calculator and sometimes a calculator can save a lot of time.