



8 ACT STRATEGIES FOR MATH

1.) Just Solve: This is a strategy that the book uses to describe the real short, computational type problems that are easily plugged into a calculator or solved using basic arithmetic.

I. Ex: $.2521 \times 8.012 = ?$

2.) Draw Diagram or Picture: This is a basic strategy that deals with more of the physical word problems such as perimeters, similar triangles, areas, etc.

I. Ex: What is the maximum number of non-overlapping sections that can be created when a circle is crossed by 3 straight lines?

II. Ex: The length of a rectangle is 5 more than 3 times the width. The width is 5cm. what is the perimeter?

3.) Test-the-Test: If it is too difficult to create an formula or solve an equation then work backwards and plug in the answers. Test the answers that the ACT is providing because one of them is correct.

I. Ex: Which of the following is the larger of the 2 numbers the product of which is 600 and the sum of which is 5 times the difference between the 2.

A. 10 D. 30

B. 15 E. 50

C. 20

II. The sum of the digits of a 3 digit number is 16. If the tens digit of the number is 3 times the units digit, and the units digit is one quarter of the hundreds digit, then what is the number?

A.446 B. 561 C. 682 D. 862 E. 914

4.) Made-Up Amounts: This is a great strategy to use for population problems or problems that ask to test generalities. Make-up an easy-to-use number and apply it to the problem, following the criteria the problem sets up.

I. If n is any integer which of the following must always be odd?

A. $n - 1$

B. $n + 1$

C. $n + 2$ (Test these using made up integers 1 and 2)

D. $2n + 1$

E. $2n + 2$

- II. If $\frac{1}{3}$ of the number of girls in a school equals $\frac{1}{5}$ of the total number of students, what is the ratio of girls to boys in the school?

5.) Elimination: Students sometimes refer to this as guessing, but a lot of times there are questions on the ACT where the answers do not make sense at all and 2 or 3 can be eliminated. This strategy helps the students look at the answers when stuck and eliminate a couple before guessing. A 1:2 chance is better than a 1:5 chance.

6.) List out Possibilities: Good for the easier permutation/combination problems where a short list can be made and counted such as:

- I. 3 friends are playing Rock, Paper, Scissors. How many unique combinations are possible? (hint: its not 9)

7.) Plug and Chug: This strategy is used when the question gives you a value to plug into an equation or formula. This is good for the area problems, Trig problems, composition of functions, etc. Just take the value given and plug it into the equation.

I. If $f(x) = 2x - 3$ and $g(x) = x^2 - 2$, then $f(g(x)) = ?$

- II. If a circle has a diameter of 15 units what is the area of $\frac{1}{4}$ of that circle?

8.) Approximation: There are problems that will come out and ask the students to approximate an answer or times when the problem can be done quicker by approximating some of the values to apply to the problem. This is a time-saving strategy.

- I. Which of the following fractions is the smallest?

a. $\frac{111}{221}$ b. $\frac{75}{151}$ c. $\frac{333}{998}$ d. $\frac{113}{225}$ e. $\frac{101}{301}$