

Gellerisms

for PreACT/ACT Mathematics

- **MATH IS JUST ANOTHER LANGUAGE.** The Pre-ACT/ACT math problems will be presented in English language, math language and diagrammatic language. The ability to translate is paramount; let the problems talk to you.
- **YOU CAN'T WRITE THE ESSAY IF YOU DON'T KNOW THE ESSAY QUESTION.** If a problem begins with the word "if," always look past the comma first to determine exactly what the problem is asking.
- An important part of problem solving is to be neat and disciplined as you work.
- Through **PRACTICE** you will learn what "they're" testing and thus be able to move more quickly through the math sections.
- Become comfortable solving many problems algebraically from start to finish rather than relying on the answer choices as a crutch for your problem solving.
- Solve the first twenty problems as quickly as possible – without too much calculator assistance – spending more time on the last twenty, more difficult problems
- Underline adjectives in math problems, i.e. "positive," "different," "least," etc. They mean a lot toward solving a problem.
- "Integer" is a frequently appearing word on the college-entrance tests. **THE INTEGERS ARE THE COUNTING NUMBERS, THEIR OPPOSITES AND ZERO.** A casual definition: the numbers you would use to label a number line. Learn and understand the definition!!!!
- There are five ways to combine equations: substitution and **SMOOSHING** using the addition, subtraction, multiplication and division properties of equality.
- Always **SIMPLIFY BEFORE YOU SUBSTITUTE!** Using the properties of equalities, fractions and proportions, make expressions and equations "easier."



- If you see the word “product” or “sum,” just relax and know that some other students mix up the two operations. “They” are just testing math vocabulary.
- There are only three ideas that you need to know about prime numbers: the definition, 1 is NOT a prime number and 2 is a prime number.
- If a problem speaks of “factor” (synonymous with “divisor”), identify the associated “multiple” (synonymous with “product”) and vice-versa.
- GO BACK TO FOURTH GRADE and review fraction concepts. Be able to manipulate common fractions – add, subtract, multiply, divide and simplify them.
- DON'T LET ANYTHING HANG; GET A 1 UNDER IT. Then you will have a proportion to which you can cross multiply. And get rid of those slanty bars; FRACTIONS HAVE TOPS AND BOTTOMS.
- When confronted with rational equations, the quickest solution is to multiply all terms on both sides by the least common denominator, i.e. DROP THE BOTTOMS.
- When asked to find a percent of increase or decrease, remember the formula
$$\frac{\text{DIFFERENCE}}{\text{ORIGINAL}}$$
- There are three types of average problems: finding an average; finding an average when the word “consecutive appears in the problem – do LITTLE WORK, the average is the middle number; finding a missing addend when the average is given – use
$$S = NA$$
- A triangle problem often will be one of three types: if only angles are “discussed” – the sum of the degrees of the angles in the triangle equals 180° , if angles and sides are “discussed” – the side opposite the greatest angle is the longest, and if only sides are “discussed” – in length the third side has to be less than the sum of the other two sides and greater than their difference
- Exterior angle theorem – measure of the exterior angle is equal to the sum of the two remote interior angles – has been on soooooo many tests.
- LENGTH OF ARC = PORTION OF CIRCUMFERENCE

- When no values are given, turn percent and geometry problems into REAL LIFE SITUATIONS – PLUG IN NUMBERS.
- Make your life easier if inequalities of sides are not required: use a cube if the problem speaks of a “rectangular solid” and use a square if the problem speaks of a “rectangle”
- You’ve been brain washed: you do not always have to distribute; you do not always have to use perimeter – sometimes half the perimeter will do.
- Surface area = AREA OF THE SURFACES
- A SLANT LINE IS ALWAYS SOMEONE’S HYPOTENUSE.
- For distance rate and time problems, draw a chart and draw a picture. YOURS WILL BE BETTER THAN MINE!

