Gellerisms

for the ACT Mathematics Test

- MATH IS JUST ANOTHER LANGUAGE. The ACT math problems are presented in English language, math language and in diagrams. The ability to translate from one language to another is paramount. Let the problems speak to you.
- No formulas are provided for the ACT Mathematics Test. They must be understood and memorized.
- 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 section. The ACT Mathematics Test contains sixty problems that must be solved in sixty minutes. Become comfortable solving many problems algebraically from start to finish rather than using the answer choices as a crutch. Finish the first twenty problems as quickly as possible without too much calculator assistance then you will be able to spend more time on the last twenty, more difficult problems.
- If you're taking a paper and pencil ACT, underline significant adjectives such as "positive," "different," "least," etc. They can be facts to be applied.
- "Integer" is a frequently appearing word on the college-entrance mathematics tests. THE INTEGERS ARE THE COUNTING NUMBERS, THEIR OPPOSITES AND ZERO. A casual definition: the numbers you would use to label a number line.

- 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."
- KNOW SLOPE RIGHT SIDE UP, UPSIDE DOWN, BACKWARDS AND FORWARDS!
- KEEP ONE EYE ON THE ANSWERS AT ALL TIMES. Quite often, if a problem has two parts – for example, you're asked for the x and y coordinates of the midpoint of a line – solving just one part may be sufficient to identify the correct answer choice.
- If you see the word "product" or "sum," just relax, knowing that some other students mix up the two operations. ACT is 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 ORIGINAL over DIFFERENCE
- 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^o 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 in degrees of the exterior angle is equal to the sum in degrees 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!