

# Things I Wish I Could Have Told Them . . .

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Collected after seeing the same “small” mistake over and over on the AP Calculus Exams

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1. There is no need to simplify arithmetic (even in a long Riemann Sum).
2. Don't cross out your work unless you know you can do better.
3. Be sure to label your answers.
4. If you are afraid your result is wrong in part A, use it anyway to finish the problem.
5. If you do something on the calculator, describe it clearly in mathematical terms.
6. Don't write bad math. Examples: “slope of derivative (unless you mean  $f''$ )”. If your area or volume integral comes out to be negative, explain what you did to make the answer positive.
7. Remember: Give your answers to 3 decimal places, rounded or truncated (more is ok). It is wise, however, to keep several more figures of accuracy on intermediate calculations like intersection points.
8. Don't write  $f(x) = 21.5 + 3$  when you mean  $f(1.5) = 21.5 + 3$ .
9. Name the function you are referring to. Not, “its slope is...” but, “the slope of  $g$  is . . .” when more than one function is being used. Pronouns can get you in trouble.
10. If you are being asked to write an integral, start with at least the limits and constant and make a guess at the integrand.
11. Know the difference between increasing and positive.  $f$  is increasing, when  $f'$  is positive.
12. Remember, you only need to do the four functionalities on your calculator. (Graph, Zeros, Numerical derivative, Definite integral). No question will be written which will require anything else and no question will be presented where using something else would be an advantage.
13. Know the difference between local (relative) and global (absolute) extrema.
14. Know the difference between the extreme value and the location of the extreme value.
15. Know the difference between a point in time and in interval of time. “During, before, within, after and until” are intervals. “At” or “when” indicate a point in time!
16. If you use a rule, show how it applies to the given problem. Generic theorems or procedures get no credit.