Appendix I: Calculators in This Class
(Courtesy of C. Bender)

You need to purchase a Casio fx-260 solar calculator for this class, and will be required to use it during all exams and quizzes. This is a simple, scientific calculator that will be more than sufficient to perform any calculations you will encounter in general chemistry. Below are images of this model of calculator.

In the display is the number $6.626 \times 10^{-34}$. So how do you input an exponential value into one of these calculators? Use the EXP key (see the black arrow in the figure).

Let’s say you want the number $6.626 \times 10^{34}$; you simply type $6.626 \text{ EXP} 34 \ П$. The \textit{EXP} means that you will raise 10 to some power.

Notice how you would type in $10^9$ or $1 \times 10^9$ (see the image below). If you want to type in this number you would type $1 \text{ EXP} 9$.

If instead you type $10 \text{ EXP} 9$ the calculator would translate this as $10 \times 10^9$, which would be $10^{10}$—your calculation would be off by a whole order of magnitude!!
Here is the display of a number from a typical calculation \((1.92697736 \times 10^{25})\). The Casio returns 10 digits, plus the power of 10. This calculator actually keeps more digits in its memory than is displayed on the screen. Usually, 6-7 significant figures will be more than enough digits for your calculations.

Although these calculators are simple, they are powerful, too. They have
1. memory functions,
2. a way to retype a number if you put in a wrong digit,
3. take the reciprocal of a number,
4. (a) calculate square roots and (b) cube roots quickly,
5. nested functions (i.e., use parentheses to separate parts of a calculation),
6. raise any number to any power, and
7. take the log of a number, or the inverse (or anti) log \((10^x)\) of the number.

4a. To take the square root, hit the SHIFT key, followed by \(x^2\)
4b. Hit SHIFT, then \(\div\) to take the cube root
2. Hit this arrow key to backspace
5. These keys allow you to perform functions in parentheses

7. To take the log of a number, type the number, then hit the log key. To take the inverse log (or \(10^x\)), type in the number, then hit the SHIFT and log keys.
3. Hit SHIFT and the \(\overline{---}\) key to take the reciprocal of a number
1. Hit the SHIFT key, then MR to put the number to the memory. Hit MR to recall the number from memory
6. To raise a number to a specific power, type the number, hit the \(x^y\) key, then type the power to which you wish to raise the number. Example: To enter \((0.055)^{1.7}\), you would type 0.055, then hit \(x^y\), then type 1.7.