How Good are You on the Scientific Calculator?

Perform the following calculations, using your calculator. For simplicity, round your answers to 2 significant figures. Practice for sig. fig. is provided elsewhere. GET HELP IMMEDIATELY if you are not getting the right answers. YOU CANNOT AFFORD TO WAIT!

1.
$$(2.5 \times 10^{4}) (3.1 \times 10^{6}) = 7.75 \times 10^{10} = 7.8 \times 10^{10}$$

2. $(-3.7 \times 10^{8}) (4.9 \times 10^{-7}) = -1.813 \times 10^{2} = -1.8 \times 10^{2}$
3. $\frac{(4.7 \times 10^{6})(1.5 \times 10^{8})}{(2.6 \times 10^{9})(3.8 \times 10^{4})} = 7.135627 = 7.1$
4. $(\frac{3.1 \times 10^{7} + 8.2 \times 10^{5}}{5.1 \times 10^{7}}) = 6.239215 \times 10^{-1} = 6.2 \times 10^{-1}$

5.
$$\frac{(1.7 \times 10^{8})(2.4 \times 10^{-4})}{(4.7 \times 10^{-2}) + (3.7 \times 10^{-8})} = 8.680844 \times 10^{5} = 8.7 \times 10^{5}$$

6.
$$\frac{10^{7} \times 10^{-6}}{10^{14} \times 10^{-21}} = 10^{8}$$

.

7.
$$3.7 \times 10^{-4} \left(\frac{10^{19}}{10^{-27}}\right) = 3.7 \times 10^{42}$$

8.
$$2.1 \times 10^{-3} \left(\frac{1}{10^{-7}}\right) \left(\frac{10^{-8}}{1}\right) = 2.1 \times 10^{-4}$$

For Gen Chem I students, you can stop here. You will not be handling log and ln (natural log) questions in the first semester.

For Gen Chem II students, you DO need to be able to do log problems such as the ones below.

9.
$$\log \text{ of } 4 \ge 10^{-8} = -7.4$$

- 10. antilog of $-6.92 = 1.2 \times 10^{-7}$
- 11. ln of 3.2 x $10^{-4} = -8.0471896$ (recorded as -8.05)
- 12. antiln of $-2.78 \times 10^{-2} = 0.9725828$ (recorded as **0.9726**)