

## Calculator Practice 3

1. You should get familiar with several different calculators. Different calculators have different features (some with brackets, some without, etc). Buttons in different places. Different calculators have different ways of doing the operations: sometimes you enter the angle then hit the function button (like 'sin'), sometimes you just type in like the expression is written. Some calculators even mess up **BEDMAS** a bit!
2. Get especially familiar with your own calculator and the TI 83. If your calculator has **brackets**, learn how to use them, but often it becomes too tricky if there is a complex calculation even with using brackets. You will often have to solve large calculations in several **steps** and writing the sub-calculations down along the way on paper!
3. Always use brackets to group together expressions in the numerator and expressions in the denominator. Example:  $\frac{3+1}{2+2}$  would be entered as: **(3 + 1) ÷ (2 + 2)** on the calculator if you insist on using the brackets on your calculator.
4. Calculate these expressions; use several different calculators if you can. Check them manually without a calculator. Don't forget **BEDMAS**: the order of operations: **Brackets** first, then **Exponents and Roots**, then **Multiply & Divide**, then **Add & Subtract**.
5. Further you should always have a rough idea of what your 'plastic brain' is going to tell you, so do an estimate of the answer before you start smashing numbers into the 'plastic brain'! At least that way you will be able to catch any big errors you might make with your calculator.

Find the exact decimal value of the following

a. <b>10 - (-2)</b>	b. <b>-20 + 5<sup>2</sup></b>	c. <b>(3 + 1)<sup>2</sup>/8</b>	d. $\frac{1}{7}$
12	5	2	0.142857 142857 142857 ...
e. $\frac{6+4}{10}$	f. $\frac{6+4}{3+2}$	g. $\sqrt{18-2^2}$	h. $2.1^3$
1	2	16	9.261.....

i. $\left(\frac{2}{3}\right)\left(\frac{8-2}{2}\right)^2$ 6	j. $3\sqrt{20+5}$ 15	k. $\frac{1}{2\sqrt{4-3}}$ 0.5	l. $2\sin(30^\circ)$ 1
m. $\frac{3 \tan 45}{6}$ 0.5	n. $\sqrt[3]{7+1}$ 2	o. $\frac{3}{8} + 2\frac{1}{4}$ 2.625 or 21/8 or $2\frac{5}{8}$	p. $\left(\frac{1}{2}\right)^0$ 1
q. $\$10\left(1 + \frac{0.05}{12}\right)^{5*12}$ \$12.83358679	r. $\frac{12.4 * 10^{25}}{6.2 * 10^{23}}$ 200	s. $(3 * 10^6)^2$ 9 E 12 or $9 * 10^{12}$	t. convert to a reduced fraction: 0.890625 57/64

6. Explain how to make sure **your** calculator is in the correct **mode** for ‘angle’ measurements (ie: how to make sure it is in degrees [°] instead of ‘rads’).

7. Make sure you know how to do Scientific Notation using your calculator if you are soon taking a science course. Some calculators will have an **EXP** button or an **EE** button to input Scientific Notation. This is essential if you take Physics or Chemistry!

8. And remember, your calculator only works in decimal, so any answers you get may not be exact answers!  $\sqrt{2}$  for example will never ever be calculated by any computer!