

### Some common errors

The following errors are commonly found in mathematics homework and exams. Please try to avoid these mistakes. When grading papers, the three letter abbreviations may be used to indicate these errors.

- EQN. Misuse of the equal sign. When we write the equal sign,  $=$ , the quantities appearing on either side should be equal. We have often seen students write something like  $x^2 = 2x$ , when they mean  $\frac{d}{dx}x^2 = 2x$ .
- ALG. Mistakes in algebra. It is not true that  $\sqrt{a+b} = \sqrt{a} + \sqrt{b}$ . Try  $a = b = 1$ . It is also not correct to cancel  $b^2$  to obtain  $\frac{a+b^2}{b^2} = a$ .
- EXP. Incomplete explanations. Your goal in working a problem in mathematics is not just to arrive at a correct answer, but to also show that you understand why the answer is true. In general, your explanations should be written out in complete sentences. Occasionally, students will find a value of an integral or limit by using their calculator. Such answers will generally not receive credit for lack of explanation.
- UNI. Missing or incorrect units. In applied problems, one should give the units for the answer. Thus the velocity of a wombat might be 10 meters/second or 1000 centimeters/second, but never 10.
- AXE. Label your axes. When drawing a graph, you should give the coordinate for each axis and label a few tick-marks on each axis.