1M01 Mathematical Methods 2010–2011

Errata for calculus notes

December 8, 2010

This is a list of the errors in the printed notes I handed out. Hopefully they're now corrected in the online versions.

Course title on first page The year was wrong in my printouts. It should say

$$1\text{M01 Mathematical Methods } 2010\text{–}2011$$

Timetable on first page The lecture venues have changed. They should all be:

Joly Theatre, Hamilton Building (Theatre 4).

Example 2.1.3 The formula for $f(x)$ should be

$$f(x) = 1.539 + 0.861x - 0.26x^2 - 0.1x^3.$$

Example 3.3.1 In the graph, the labelled curve should be $y = b'(t)$, not $y = b(t)$. This is pretty important, as the example doesn't make sense otherwise!

Definition 3.4.1 The first line should be:

The average value of a function $f(x)$ as x varies from $x = a$ to $x = b$ is

Example 4.2.5 This should say: "Simplify the following, rewriting them using fractional powers".

Example 5.6.3 The left hand side of the formula should be $f(t)$ rather than $f(x)$.

Theorem 6.2.1 (The quotient rule). I wrote $\dfrac{dv}{dx}$ instead of $\dfrac{du}{dx}$. So the formula should be:

$$\frac{d}{dx}\left(\frac{u}{v}\right) = \frac{v \cdot \frac{du}{dx} - u \cdot \frac{dv}{dx}}{v^2}.$$

Page 69, boxed comment All of the s's in the equation in the middle should be m's. So it should say

$$y = kx^m \implies \ln(y) = \ln(kx^m) = \ln(c) + m\ln(x) \implies Y = mX + C$$