**Mathematics 1100Y – Calculus I: Calculus of one variable**
TRENT UNIVERSITY, Summer 2012

**Assignment #2**
**More plots with `Maple`**
*Due on Wednesday, 6 June, 2012.*

Before tackling this assignment, you should consult `Maple`'s help for details on how to get it to do plots of parametric curves and of curves in polar coordinates. (The `plots` package adds a `polarplot` command ... )

For questions **1** and **2** below please submit a printout of a Maple worksheet(s) as your solution.

**1.** Use `Maple` to plot the parametric curves given by $x = t$ and $y = t$, by $x = \cos(3t)$ and $y = \sin(4t)$, by $x = \cos(t)$ and $y = \frac{1}{2} + \frac{1}{2}\cos(2t)$, and by $x = 1$ and $y = \sin(t)$, respectively, for $0 \leq t \leq 2\pi$ in each case. *[4]*

**2.** Use `Maple` to plot the polar curves given by $r = \theta$, by $r = 1$, by $r = 1 - \cos(\theta)$, respectively, for $0 \leq \theta \leq 2\pi$ in each case, and by $r = \dfrac{\sin(\theta)}{\cos^2(\theta)}$ for $-\pi/2 < \theta < \pi/2$. *[4]*

**3.** Which of the curves you plotted in **1** and **2** are really the same? *[2]*