Math 101 – WORKSHEET 7
SUBSTITUTION, AREA BETWEEN CURVES

(1) Evaluate the integrals

    (a) (Final, 2013) $\int_1^3 (2x-1)e^{x^2-x}\,\mathrm{d}x =$

    (b) (Final, 2012) $\int_0^3 (x+1)\sqrt{9-x^2}\,\mathrm{d}x =$

(2) Area between curves
   (a) (Final, 2011) Find the total area of the finite place region lying between the curves $y = x$ and $y = x^3$.

   (b) (Final, 2014) Find the area of the finite region bounded between the two curves $y = \sqrt{2}\cos(x\pi/4)$ and $y = |x|$. It will be useful to sketch the region first.