Calculus II, MAT102,

Sheet 3 (Improper Integrals)

Name	
Student Number	
Year	
Mark	/10
Hand in by	

(Exercises)

Please attach your working, with this sheet at the front.

1. Evaluate the following integrals

   (i) $\displaystyle\int_1^\infty e^{-2x}\, dx$

   (ii) $\displaystyle\int_{-\infty}^0 xe^{-4x}\, dx$

   (iii) $\displaystyle\int_{-\infty}^\infty \frac{1}{1+x^2}\, dx$

   (v) $\displaystyle\int_0^9 \frac{1}{\sqrt{x}}\, dx$

   (vi) $\displaystyle\int_1^4 \frac{1}{(4-x)^{2/3}}\, dx$

   (vii) $\displaystyle\int_0^\infty \frac{1}{(x-2)^2}\, dx$