

Math 125 Worksheet #3
July 10, 2007

1. Evaluate the following integrals using substitution.

(a) $\int 5t \sin(t^2 + 2) dt$

(b) $\int_1^4 e^{\sqrt{x}} dx$

(c) $\int_{\pi/6}^{\pi/2} 2 \ln(\sin \theta) \cot \theta d\theta$

2. For $f(x) = e^{-x}$ and $g(x) = e^{2x-6}$, find the area of the region bounded between the two curves and the y -axis as shown in the figure below.

