

Quiz 7 - Math 53  
October 24, 2008

Name \_\_\_\_\_

1)[3pts] Compute the integral  $\int_0^\infty \int_2^6 e^{-y^2x} dy dx$ .

2)[3pts] Compute the integral  $\int_0^1 \int_{\arctan(x)}^{\pi/4} \sec(y) dy dx$ . (Hints: 1: Switch the order of integration. 2: When the time comes, recall that  $\frac{d}{dx}(\sec(x)) = \tan(x) \sec(x)$ )

3)[3pts] Compute  $\int_0^1 \int_{-\sqrt{1-x^2}}^{\sqrt{1-x^2}} e^{x^2+y^2} dy dx$  by converting to polar coordinates.