

**Math 675**  
Assignment #8

Name \_\_\_\_\_

56. Find the leading behavior of  $\int_0^\infty \exp\left(-t - \frac{x}{\sqrt{t}}\right) dt$  as  $x \rightarrow \infty$ .

57. Find the first few terms in the expansion of  $\int_0^{\pi/2} \theta e^{-x \cos^2 \theta} d\theta$  as  $x \rightarrow \infty$ .