4/4/2001 MA401 Complex Analysis Name:_____
Dr. Lunsford Quiz 9 (20 Points Total)

Compute the integral over the indicated closed curve $\Gamma$. For each problem clearly indicate what theorem(s) you use and why you know you may use the theorem (you may use your textbook). (5 points each)

1. $\int_{\Gamma} \frac{\cos 2z}{z+i} dz$ where $\Gamma$ is the closed curve determined by the equation $|z| = 2$.

2. $\int_{\Gamma} \frac{2z^3}{(z-2i)^2} dz$ where $\Gamma$ is the closed curve determined by the equation $|z| = 1$

3. $\int_{\Gamma} \frac{\cos 2z}{(z-i)^2} dz$ where $\Gamma$ is the closed curve determined by the equation $|z| = 2$

4. $\int_{\Gamma} \frac{7z+i}{z^2+1} dz$ where $\Gamma$ is the closed curve determined by the equation $|z| = 2$