

Eskişehir Osmangazi University - Electrical Engineering Department  
Advanced Calculus  
Final Examination - Summer 2012

!!! For each problem put the answer next to it !!!

1. Evaluate (a)  $\sin(0.3 + i)$ , (b)  $1^i$

2. Let  $C$  be the positively oriented circle  $|z-1| = 1$ . Evaluate  $\int_C \frac{1}{(z-0.5)(z-1.8)} dz$ .

3. Find a general solution for  $\frac{dy}{dx} - y + e^x + e^{2x} = 0$ .

4. Find a general solution for  $\dot{x} + x + y = 0$ ;  $\dot{x} + \dot{y} + x = 0$ .

A. Karamancıoğlu