

**Math 277 01,
the course of Dr. Mihailovs**

Midterm 1

September 18, 1998

Name _____

Problem	1	2	3	4	5	6	7	8	9	Extra	Total
Points											

1. Solve $y' = 3x + 2$.

2. Solve $\frac{dy}{dx} = \frac{x}{y}$.

3. Solve the initial-value problem $\frac{dy}{dx} = \frac{x}{y}$, $y(0) = 1$.

4. Evaluate $e^{i\pi/6}$.

5. Evaluate $\left(\frac{\sqrt{3}}{2} + \frac{1}{2}i\right)^{-6i}$.

6. Solve $xy' + 2y = \cos x$.

7. Solve the initial-value problem $y' - 2y = e^{3x}$, $y(0) = 1$.

8. Solve $y'' + y' - 2y = 0$.

9. Solve the initial-value problem $y'' + y' - 2y = e^x$, $y(0) = 0$, $y'(0) = 1$.