

**Math 173 04,
the course of Dr. Mihailovs**

Midterm 2

October 28, 1998

Name _____

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

1. Find $f'(x)$ for $f(x) = \sin(3x + 2)$.

2. Find an equation of the tangent line to the curve $y = x^4 \tan 2x - x \cos 3x$ at the point $(0, 0)$.

3. Find y' if $x^2 + y^4 = 3$.

4. Find the 100th derivative of $f(x) = x^{73} - 2x^{61} + 137$.

5. Find an approximate value for $\sqrt{25.1}$.

6. Find maximum and minimum values of $f(x) = \frac{4x+3}{x^2+1}$, $-3 \leq x \leq 1$.

7. Sketch the graph of $y = \frac{x^3}{x^2-3}$.

8. Find $f(x)$ if $f'(x) = \sqrt[4]{x} + \cos 2x$.

9. Find $f(x)$ if $f'''(x) = 12$, $f(0) = 6$, $f'(0) = 8$, $f''(0) = 10$.