

MATH 1271: CALCULUS I
MIDTERM TEST II: ANSWERS TO THE SAMPLE
EXAM

INSTRUCTOR: ALEX VORONOV

Below are answers, not complete solutions. On the test, you will have to show all work.

- (1) (1) $\frac{2 \cos \ln(x^2)}{x}$; (2) $x^x(\ln x + 1)$; (3) $e^{x/2}/2$; (4) $\frac{-1}{|x|\sqrt{x^2-1}}$; (5) $\frac{2(2x^3+y^2)}{y(3y-4x)}$.
- (2) $-11!/x^{12}$.
- (3) (1) $y = 3x - 4$; (2) 2.18.
- (4) 36.
- (5) $\frac{4}{3}\text{cm}^2/\text{min}$.
- (6) Absolute and local minimum value: $-1/4$, absolute maximum value: 2.