Math 1300-005 - Spring 2017

Midterm 3 Review, Part I - 4/7/17

Guidelines: Please work in groups of two or three.

1. Find the absolute maximum value and the absolute minimum value of

$$f(x) = 2^{(x^2-4x)}$$

on the interval $[0, 3]$.

2. Use logarithmic differentiation to find the derivative of

$$y = \big(x^2 \tan(x)\big)^x.$$

3. (a) Use the linearization of the function

$$f(x) = \tan\left(\frac{1}{4}x\right)$$

at the x value $a = 0$ to find an estimate for

$$\tan\left(\frac{1}{4}(-0.08)\right).$$

(b) Is this estimation of overestimate or an underestimate? Justify your answer.