

December 18, 2014

QUIZ#4 Math101-sec 32.

Net Time Allowed: 20 minutes

Name:

ID # :

Serial #:

Exercise1:(06 points)

Consider the function f given by $f(x) = (x^2 - 3)e^x$.

1. Find the critical points of f .
2. Identify the intervals on which f is increasing and decreasing.
3. Find the function's local and absolute extreme values.

Exercise2:(04 points)

Find the following limits :

1. $\lim_{x \rightarrow 0} \frac{4 - 4 \cos x - 2 \sin^2 x}{x^4}$.
2. $\lim_{x \rightarrow 1} x^{\frac{1}{x-1}}$.