Math 101, Section 32
Fall 2015, Term 151

Quiz 6
Version A

Instructions: Show Your Work!

1. (3 pts) Show that the equation $x^4 + 4x + 4 = 0$ has at most two real roots.

2. (4 pts) If $f(x) = x - \frac{1}{6}x^2 - \frac{2}{3}\ln x$, find the

(a) local maximum and local minimum values (if any),

(b) intervals of concavity and the inflection points.

3. (3 pts) Find the limit

$$\lim_{x \to 1^+} (x - 1)^{\sqrt{x-1}}$$

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