

Name: _____

Math 105: Fall 2012

Quiz: November 30

Correct answers accompanied by incorrect or incomplete work will not receive full credit. Good Luck!

1. Use the Intermediate Value Theorem (IVT) to show that $f(x) = e^x \ln(x + 1) \cos(\pi x)$ has a root between 2 and 3.

2. What (if anything) does the Extreme Value Theorem (EVT) tell us about $f(x) = e^x \ln(x + 1) \cos(\pi x)$ on the interval $(2, 3)$? Explain your answer.

3. What (if anything) does the Mean Value Theorem (MVT) tell us about $f(x) = e^x \ln(x + 1) \cos(\pi x)$ on the interval $[2, 3]$? Explain your answer.