

ESP Quiz 10 (Kouba)

Please PRINT your name here : _____

This quiz is OPTIONAL. It is just for practice. It is due next Tuesday at the beginning of ESP.

1.) (10 pts. each) Use shortcuts to find the first four nonzero terms of the Maclaurin series for each function.

a.) $e^{-x} \cos x$

b.) $(x + 2) \sin^2(x/2)$

c.) $\frac{\arctan(x^2)}{\ln(1-x)}$

2.) (10 pts.) Use a Maclaurin series to estimate the value of $\int_0^1 \frac{1 - \cos x}{x} dx$ with absolute error at most 0.0001.

3.) (10 pts.) Use a Maclaurin series to estimate the value of e with absolute error at most 0.0001.