

Name: _____

Answer the questions in the spaces provided on this sheet. Your scans must be clear, aligned, cropped properly; pages in order and saved in a single pdf file in black and white.

1. (a) For the function $f(x) = e^{-x}$, find the Taylor polynomial of degree 3 about $x=0$.

- (b) Use the above to estimate $e^{-0.1}$. How many correct digits does your estimate have?

2. Integrate the function $f(x,y) = xy$ over the triangle with vertices $(1,0)$, $(0,1)$, and the origin.