

Name: _____ Section: _____

Answer all questions and show your work. Unsupported answers may receive *no credit*. You may not use a calculator on this quiz. Allow 15 minutes for the quiz.

1. (5 points) Find the average value of the function $f(x) = xe^x$ on the interval $[0, 2]$.

2. (5 points) Calculate the volume of the following solid S . The base is the region enclosed by $y = x^4$ and $y = 9$. The cross-sections perpendicular to the y -axis are squares.