

Show all work clearly and in order. Justify your answers. You have 15 minutes for this quiz.

PROBLEM ONE Set up an integral for the arc length of the curve given by  $y = 2e^x + \sin(x)$  for  $0 \leq x \leq 2$ .  
YOU DO NOT NEED TO EVALUATE THE INTEGRAL.

PROBLEM TWO Compute the surface area of the solid of revolution obtained by rotating the curve given by  $y = 2 + x^2$  about the  $y$ -axis.