

MATH 2300: Honors Calc 2

Oct 16, 2014

Quiz 4

I have neither given nor received unauthorized assistance on this exam.

Name (print): _____

Signature: _____

DO NOT WRITE IN THIS BOX!

Problem	Points	Score
1	30 pts	
2	30 pts	
3	25 pts	
4	15 pts	
TOTAL	100 pts	

1. Find the area inside $r = 1$ and outside $r = 1 + \sin \theta$.

2. Find the center of mass of the quarter circle in the first quadrant of radius 2 if the density of the region is $\delta = x$.

3. Find the Taylor polynomial of degree 4 for $\ln x$ near the point $x = 1$. Use it to approximate $\ln 2$.

4. Does the sequence $a_n = n \sin \frac{1}{n}$ converge or diverge? Show your work.