
MATH 1700 Laboratory Quiz 3

Summer 2020

Time: 20 minutes

Name: _____

Student ID: _____

Instructor: Iman Soliman

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1. [7 points] Evaluate the following definite integral

$$\int_2^4 \frac{1}{\sqrt{x^2 - 4}} dx$$

2.[7 points] Setup the partial fraction decomposition for the following rational function

$$\frac{x^2 + 8}{(x^2 + 3x - 10)^2(x^4 - 16)^2}$$

3. [6 points] Use Comparison Theorem to determine whether or not the following integral is convergent.

$$\int_3^{\infty} \frac{x}{\sqrt[8]{x^{11} - 2 \cos^2(4x)}} dx$$

4.[2 points] Set up the definite integral of the arc length of the curve $y = \cot^{-1}(3x)$ on $[\frac{\pi}{6}, \frac{\pi}{3}]$. Do not evaluate the integral.