MATH 142: Dr. ALLAN BICKLE

EXAM 2 Form A

Tuesday, October 25, 2022

Name: _____

Directions: For each question, show all work. Little or no credit will be awarded for a final answer with no justification. Partial credit will be awarded for partially correct work.

No calculator will be allowed on this exam. You are allowed a 3" × 5" notecard.

You will have 50 minutes to complete this exam.

1. [10 points each] Evaluate the following integrals.

a.

$$\int_1^\infty \frac{\ln x}{x}\,dx$$

b.

$$\int e^x \cos x \cdot dx$$

c.

$$\int \tan^3 x \cdot dx$$

d.

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

e.

$$\int \frac{2x^3 + 3x + 2}{x^2 + 1}\,dx$$

f.

$$\int \frac{2x^2 - x + 4}{x^3 + 4x}\,dx$$

$$\frac{2x^3 \quad 3}{}$$