

Name:

Math 116 Exam 1 & 2 Redo

March 31, 2022

Directions:

1. WRITE YOUR NAME ON THIS TEST!
2. Except where indicated, merely finding the answer to a problem is not enough to receive full credit; you must show how you arrived at that answer.
3. Unless otherwise indicated, DO NOT convert irrational numbers such as $\sqrt{3}$ or π into decimal approximations; just leave them as they are.
4. If you have a question, raise your hand or come up and ask me.

1) Use partial fractions to simplify $\frac{2x}{(x-1)(8+x^2)}$.

2) Recall that the Laplace Transform of a function f is defined as

$$\mathcal{L}\{f\}(w) = \int_0^{\infty} f(t)e^{-wt} dt.$$

If $f(t) = 17^t$, compute $\mathcal{L}\{f\}(2)$.

3) Find the area enclosed by the curves $f(x) = xe^x$ and $g(x) = 2x$.