

MATH 2320 Final Exam Part 2

Name: _____

This is the second part of the Final Exam. Please write clearly up answers to the questions. Show your **work**. A correct answer without correct work will not count.

Scan your work and email to instructor by 11:25am on July 15th.

1. $\int \frac{1}{\sqrt{x^2 + 9}} dx$

2. $\int \frac{2}{x^3 - x} dx$

3. Find the interval of convergence and the radius of convergence for the following power series.

$$\sum_{k=1}^{\infty} \frac{1}{k5^k} x^k$$

4. Graph the following. Show a table of points and label those points on your graph.

$$r = 1 + 2 \cos(\theta) \text{ where } 0 \leq \theta \leq \pi$$

If it is helpful $\sqrt{2} \approx 1.4$ and $\frac{\sqrt{2}}{2} \approx 0.7$.