

Name	Calculus 12	Presented: June 11-15
	Final Project	

Your mission, should you choose to accept it, is to:

- Find a problem that interests you, and requires calculus for a satisfactory solution
- Assemble a presentation that catches the interest of the class and satisfies the following criteria:

1. Project is neat, presentable, and well organized
2. No obvious grammar or punctuation mistakes
3. Correct and complete explanation of problem
4. Solution is clear, steps are explained, no major leaps in logic, etc.
5. Well laid out diagrams and graphs
6. Bibliography of your research
7. Teamwork – how well did your group work together to solve the problem {or how well did you make use of time, if you worked by yourself}

$dI = \frac{1}{2}y^2 dm = \frac{1}{2}y^2 \rho dV = \frac{1}{2}y^2 \rho \pi y^2 dz$
 and the integral becomes
 $I = \frac{1}{2}\rho\pi \int_{-R}^R y^4 dz = \frac{1}{2}\rho\pi \int_{-R}^R (R^2 - z^2)^2 dz = \frac{8}{15}\rho\pi R^6$
 Substituting the density expression gives

Presentation:

The project may take any acceptable form, i.e. a poster, a skit, a presentation (with or without multimedia) {speaker's notes are a required submission}. However, the following must be addressed regardless of the format:

- 1. Explanation of the problem**
 - a. what question are you trying to answer
 - b. background to problem – other books, website, etc
 - c. short, concise and understanding shown
 - d. proper grammar and punctuation are relevant
- 2. Solution to the problem**
 - a. explain all steps required to arrive at a solution
 - b. proper use of graphs and diagrams to explain problem/solution
- 3. Conclusion**
 - a. What did you learn – solving the problem
 - b. Limitations – What “held” you back? If you had more time and money, what could you improve upon?
 - c. Any other important results you found? {Unexpected?}

Assessment:

Your project will be marked according to the following guidelines:

A+	100	Outstanding presentation, making a very complex problem seem easy
A	86	Excellent presentation, with only minor shortcomings, such as incomplete bibliography
B	73	Well developed solution to a basic problem, presented in a competent fashion
C	60	Some gaps in the solution, or flaws in the presentation