Topic: Chapter 5 section 4, Irregular volumes

Directions:

Read chapter 5.4

Buy a baguette of bread, cut off the heel and measure and cut the loaf to a total length of 12 inches.

1. Experimentally find the $\overbar{x}$ distance from the tip of the bread to the CM of the bread.
2. Cut the bread into 12 slices with a uniform thickness of each slice at $∆x=1 inch$.
3. Show the method and give your results for the area of each slice.
4. Using a table, clearly and logically show each $x\_{c},A∙∆x, A∙∆x∙x\_{c}, \sum\_{}^{} A∙∆x∙x\_{c}, \sum\_{}^{} A∙∆x$ for all 12 slices.
5. Use the approximation method described in the book to theoretically find $\overbar{x}$.
6. Assuming the experimental $\overbar{x}$ to be the actual distances to the CM, find the percent error in your theoretical $\overbar{x}$ calculation.
7. Discuss any factors contributing to your percent error values.

Please make this document clean, neat, logical, and easy to understand your methods. Neatly show your work taking into consideration the logical flow of the paper.

This document will be graded during finals week and can earn up to a maximum of 5 points EC. The grading rubric is left to the instructor to decide, but will be based upon, neatness, following directions, and the quality of the work.

 This assignment is due by the last day of regular class before finals week begins.