

PH461 Math Methods Capstone Homework 10

Due 6/10/16, 4 pm

REQUIRED:

1. Drum

You have a drum shaped like a slice of pie ($1/6$ th of the pie). You strike the drum symmetrically (i.e. in the center, in terms of angle) at a point $2/3$ of the way radially out from the point. What are the frequencies of vibration? Find an equation that describes the subsequent motion of the drum. (Note: The radial equation that you get is Bessel's equation. You do NOT need to solve Bessel's equation (using series methods). Instead, this part of the problem is to look it up in reference materials and learn how to use the resources that you find there.)