

Second Midterm Exam, Thursday, October 24

The Second Midterm Exam will cover material through our discussion of 3 dimensional waves in Cartesian coordinates. The main topics include:

1. Vector spaces and function spaces
2. Fourier series
3. Time evolution using Fourier series or Fourier transforms
4. Fourier transforms
5. Contour integration and the residue theorem
6. Dirac delta functions
7. Three dimensional waves
8. Gradient and divergence
9. Separation of variables in Cartesian coordinates

The exam will consist of 6-8 short-to-medium length problems similar to the problem assignments. Or maybe 9. Therefore the problems are your best study guide. You may bring a 3×3 card with formulas; you may use both sides. Bring a pen/pencil. Paper will be provided.