Partial Differential Equations - Homework Day 12

Professor:
Dr. Joanna Bieri
joanna_bieri@redlands.edu

Read and Take Notes

1. *Farlow* - Lesson 13 on Laplace transforms.

Homework

1. *Problems* - Do problems $1-3$ at the end of Chapter 11. These problems use the Discrete Fourier Series, not the integral exponential transform.
2. *Problems* - Do all the problems at the end of Chapter 12.

   Note: you will need the identity

   $$e^{i\theta} = \cos(\theta) + i\sin(\theta)$$

   Note: When the book says to "verify" that something is true I would like you to show it to be true mathematically. For example in problem 2 to show that something is linear you assume that $u(x) = f(x) + g(x)$ then take the transform of both sides to show you get the same thing based on the properties of the transform and integration.

Other Notes:

1. Look carefully at the integral transform tables at the back of the book. It may even be helpful to look up some printable .pdf versions of integral transform tables!
2. Make sure you understand the difference between the discrete transform and the continuous transform.