

PHYS 301

HOMEWORK #13

Due : 25 April 2014

You may use Mathematica to compute coefficients for Fourier and Legendre coefficients; make sure you submit those outputs with your homework. Questions 2 -10. are from Boas, Chapter 13.

1. Show that $u = f(x - vt)$ and $u = f(x + vt)$ are solutions to the wave equation.

2. Problem 1, page 626.

3. Problem 3, page 626.

4. Problem 7, page 627.

(Do *one of* 5 or 6)

5. Problem 2, page 632.

6. Problem 5, page 632.

(Do *one of* 7 or 8)

7. Problem 2, page 637

8. Problem 5, page 637

9. Problem 8, page 650

10. (Extra Credit : problem 12, page 650).