

PHYS 2601 (Fall 2025): Problem Set 8

Due date: November 9, 9:00am. 50% penalty on late homework.

From Vibrations and Waves (King)

Problem 7.1 (5 pts)

Problem 7.3 (5 pts)

Problem 7.7 (5 pts)

Problem 7.8 (5 pts)

From Vibrations and Waves (French)

Problem 6-14 (10 pts)

6-14 Find the Fourier series for the following functions ($0 \leq x \leq L$):

(a) $y(x) = Ax(L - x)$.

(b) $y(x) = A \sin(\pi x/L)$.

(c) $y(x) = \begin{cases} A \sin(2\pi x/L), & 0 \leq x \leq L/2 \\ 0, & L/2 \leq x \leq L. \end{cases}$

In your solutions, please provide written comments (in addition to the math) that show your reasoning to receive full credit.

Please submit solutions electronically as a single merged pdf document to gradescope (handwritten or typeset) and tag all problems, otherwise a penalty will be applied.