Course 2E02 2014 (SF Engineers & MSISS & MEMS)

S h e e t 9

Due: at the end of the tutorial

Exercise 1

Identify even or odd functions and find their Fourier series for $-\pi \leq x \leq \pi$:

(i) $f(x) = -x$;

(ii) $f(x) = x^2$.

Exercise 2

Find the Fourier integral representation of the function

$$f(x) = \begin{cases} 0 \text{ if } |x| > 1 \\ -x \text{ if } |x| < 1. \end{cases}$$