Course 2E2 2007-08 (SF Engineers & MSISS & MEMS)

S h e e t 13

Due: at the end of the tutorial

Exercise 1

Find the Fourier series of the function $f(x)$:

(i) $f(x) = \begin{cases} 1 \text{ if } -\pi \le x < 0 \\ -3 \text{ if } 0 \le x \le \pi; \end{cases}$

(ii) $f(x) = 1 - 2x, \ -\pi \le x \le \pi;$

(iii) $f(x) = \begin{cases} \pi - x \text{ if } -\pi \le x < 0 \\ \pi + x \text{ if } 0 \le x \le \pi. \end{cases}$