

Course 2E1 2006-07 (SF Engineers & MSISS & MEMS)

S h e e t 23

Due: at the end of the tutorial

Exercise 1

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

- (i) $f(x) = -x, -\pi < x < \pi;$
- (ii) $f(x) = \begin{cases} 0 & \text{if } -\pi < x < 0 \\ 2 & \text{if } 0 < x < \pi \end{cases};$
- (iii) $f(x) = \begin{cases} 2x - 1 & \text{if } -\pi < x < 0 \\ 1 - 2x & \text{if } 0 < x < \pi \end{cases}.$