Math 135, HW 5

Due Wednesday, February 18th

1. Find the Fourier series for the following functions:

   (a) $f(x) = \begin{cases} -1 & -\pi \le x \le 0 \\ 1 & 0 < x \le \pi \end{cases}$

   (b) $f(x) = -x$

   (c) $f(x) = x^2$

   (d) $f(x) = x^2 - x$

   (e) $f(x) = x^2 + 3x$

2. Find the Fourier series for the same functions on the interval $-1 \le x \le 1$