

HW 8

# 3

Show that for every sequence  $x[n]$ :

a)  $\delta[n] * x[n] = x[n]$ .

b)  $\delta[n - n_o] * x[n] = x[n - n_o]$ , where  $n_o$  is an integer.

c)  $e^{j2\pi fn} * x[n] = e^{j2\pi fn} X(e^{j2\pi f})$ , where  $X(e^{j2\pi f})$  depends on  $f$  but not on  $n$ . What is the formula for  $X(e^{j2\pi f})$ ?