



Australian
National
University

Research School of Engineering
College of Engineering and Computer Science

ENGN2228 Signal Processing

HOMEWORK 4

Homework 4-1

Draw the following signals

(a) $x(t) = 2\delta(t+1)$

(b) $-1.5\delta(t-2)$

(c) $x(t) = \sum_{k=3}^7 2^{k-5}\delta(t-2k)$

(d) $x(t) = \int_{-\infty}^t \delta(\tau-2) d\tau$

(e) $x(t) = \int_{-\infty}^t \delta(t-2) d\tau$

(f) $\int_{-t}^t \delta(t-2) d\tau$

Homework 4-2

Draw the following signals

(a) $x[n] = -2\delta[n+2]$

(b) $x[n] = u[n] - u[n-1]$

(c) $x[n] = -u[-n] + u[-n-1]$

(d) $x[n] = 2u[-n] - u[n-3]$

(e) $x[n] = \sum_{k=-\infty}^{-1} \delta[k] + u[n]$

(f) $x[n] = \sum_{k=-\infty}^{-1} \delta[n-k] + u[n]$