Solution Set 1 (Fall 2008)

Q1. f(t) = 0 $t<0$ ms

t $0<t<1$ ms

2 $1<t<2$ ms

-(t-4) $2<t<4$ ms

1/2(t-4) $4<t<6$ ms

0 $t>6$ ms

Q2. a) Average = -7.5 (mA), RMS = 34.9 mA

b) Average = 0 (Volt), RMS = V (Volt)

c) Average = 0 ; RMS = 0.577

d) Average = 10-10e -10 ; RMS = 10(5-5 e -20) 1/2

Q4. Period T = 4 ms, f = 250 Hz, w = 1570 rad/s, and v(t) = 10cos(1570*t)