

University of Portland
School of Engineering

EE 262- Signals & Systems-3 cr. hrs.
Spring 2009

Midterm Exam # 3

(Prepared by Professor A. S. Inan)



Bonjour!
Mieux de la
chance!

(Friday, April 17, 2009)

Name: _____ 😊

Signature: _____ 😊

“Honesty is the best policy.”

Aesop (~ 620B.C. -?)

“An honest mind possesses a kingdom.”

Lucius Annaeus Seneca (4B.C.–65A.D.)

“Honest people are the true winners of the universe.”

Anonymous

(1)(25 points). Find the Fourier transform (FT) of the signal given by

$$x(t) = 3(t+1)e^{-t}u(t-2)$$

(2) (25 points) Find the Fourier transform of the signal given by

$$y(t) = \frac{d}{dt} (te^{-2t} \cos(2t)u(t))$$

(3) (25 points) Find the inverse Fourier transform of $X(\omega) = 3e^{-2\omega}u(\omega-1)$.

(4) (25 points) Find the Fourier transform of the signal given by

$$x(t) = \left(\frac{\sin(2t)}{3t} \right) * \frac{d}{dt} \left(\frac{\sin(\pi t)}{2t} \right)$$