ECE 233 Nov. 27.

Recap of Quiz #8

1. $x(t)$ R

   $x_1(t)$ R_1

   $x_2(t)$ R_2

$R_y \supset R_1 \cap R_2$

$a x_1(t) + b x_2(t) = y(t)$

~~$R_y = R_1 \cap R_2$~~

$$Y(s) = \int_{-\infty}^{\infty} y(t) e^{-st} dt$$

$$= \int_{-\infty}^{\infty} \left(a x_1(t) + b x_2(t)\right) e^{-st} dt$$

$$= \int_{-\infty}^{\infty} \left(a x_1(t) e^{-st} + b x_2(t) e^{-st}\right) dt$$

$$\int_{-\infty}^{\infty} a x_1(t) e^{-st} dt + \int_{-\infty}^{\infty} b x_2(t) e^{-st} dt$$

$x(t-t_0) = y(t)$ Ry in terms of R

$$Y(s) = \int_{-\infty}^{\infty} y(t) e^{-st} dt$$

$$= \int_{-\infty}^{\infty} x(t-t_0) e^{-st} dt$$

$$= \int_{-\infty}^{\infty} x(t-t_0) e^{-s(t-t_0)} e^{-st_0} dt$$

$$= X(s) e^{-st_0}$$

$Ry = R.$