

EE322 Fall 08 Homework Problem Set 42 (PS42)

Be sure to show your work.

1. Text, Problem 15-2a-c. Work through the Laplace integral BY HAND (no calculator) for each $x(t)$. Do not forget to specify the ROC.

Hint for part (b): rewrite the cos as the sum of two complex exponentials (Euler's identities).

Hint for part (c): use the following integral identity (which is contained in one of the textbook's appendices):

$$\int x e^{ax} dx = \frac{e^{ax}}{a^2} (ax - 1)$$