

Signals and Systems Problems S16

Reading: Lectures 15 and 16

S16)

Find the inverse Laplace transforms for each of the following. First find the inverse transform algebraically (e.g., using the cover up method). Then find the same answer graphically using the pole/zero diagram in the s plane.

a)
$$X(s) = \frac{s-3}{s^3 + 3s^2 + 2s}$$

b)
$$X(s) = \frac{s+1}{s^2 + 1}$$

c)
$$X(s) = \frac{s+1}{s^2}$$

d)
$$X(s) = \frac{s+2}{s^2 - 1}$$