

PStar replacement

Example 9-10: Convolution with Doublet

The convolution of the unit step with the doublet

 $y(t) = u(t) * \delta^{(1)}(t)$

can be evaluated by using (9.47), and the derivative property of the unit step (9.22); i.e.,

$$y(t) = \frac{d}{dt}u(t) = \delta(t)$$

McClellan, Schafer and Yoder, Signal Processing First, ISBN 0-13-065562-7. Prentice Hall, Upper Saddle River, NJ 07458. (C) 2003 Pearson Education, Inc.