



Sheet #4

1. Compute the convolution $y(t) = x(t) * h(t)$ of the following pairs of signals:

a) $x(t) = \begin{cases} 1 & -a < t < a \\ 0 & \text{otherwise} \end{cases}$, $h(t) = 2x(t)$.

b) $x(t) = \begin{cases} t & 0 < t < T \\ 0 & \text{otherwise} \end{cases}$, $h(t) = \begin{cases} 1 & 0 < t < 2T \\ 0 & \text{otherwise} \end{cases}$

2. Problems from book “*Signals, Systems and Transforms*” Chapter 3 Page 165

- a) Q. 3.1
- b) Q. 3.2
- c) Q. 3.3
- d) Q. 3.5
- e) Q. 3.6
- f) Q. 3.7
- g) Q. 3.8
- h) Q. 3.9
- i) Q. 3.14
- j) Q. 3.16