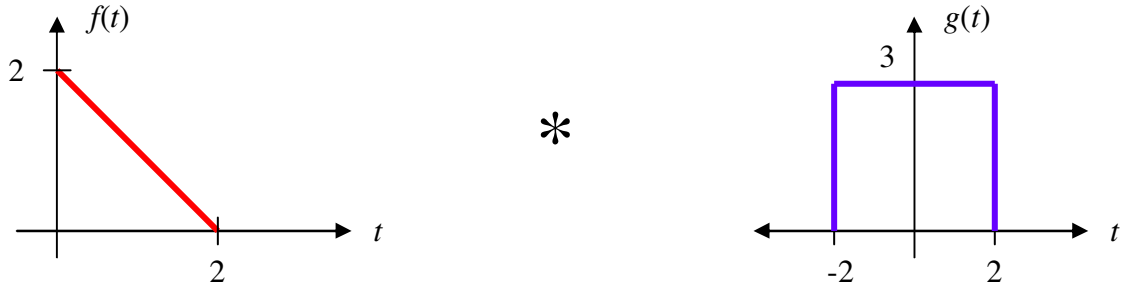


Home Work 2

Problem 2.1

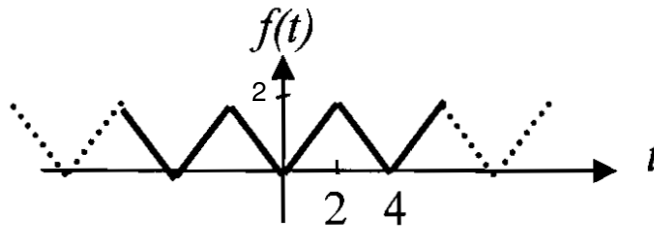
Convolve the following two functions:



Problem 2.2

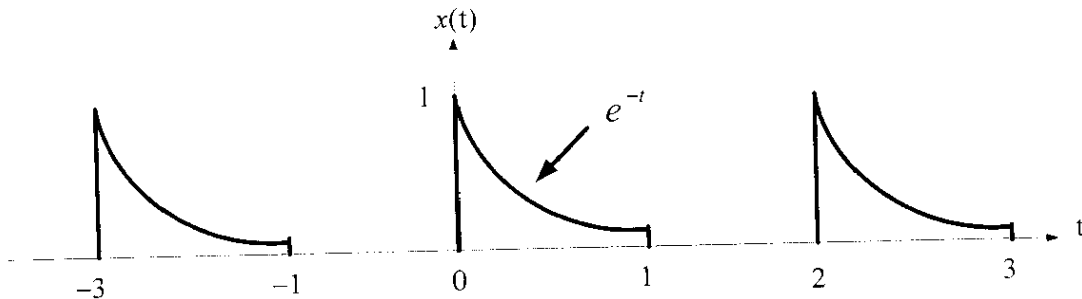
Find the trigonometric Fourier series of the periodic signal?

$$f(t) = |t|, \text{ for } -2 \leq t \leq 2.$$



Problem 2.3

For the periodic signal shown below, find the complex Fourier coefficients X_n ?



Problem 2.4

- 1) Is it even, odd, or neither even nor odd?
- 2) Find the period and the fundamental frequency of $x(t)$.
- 3) Calculate its complex exponential Fourier series coefficients X_0 and X_1

