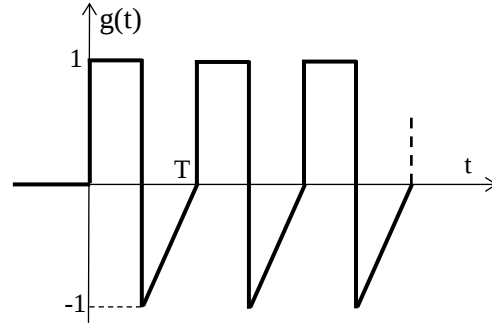
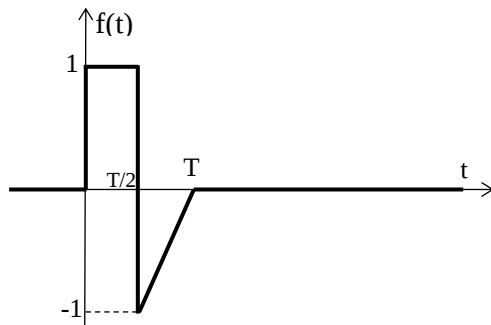


Exercice :

Déterminer la transformée de Laplace du signal $f(t)$. En déduire celle du signal périodique $g(t)$.



CORRIGE

L 

$$f(t) = u(t) + \left(-2 + \frac{2}{T} \cdot \left(t - \frac{T}{2}\right)\right) \cdot u\left(t - \frac{T}{2}\right) - \frac{2}{T} \cdot (t - T) \cdot u(t - T)$$

$$F(p) = \frac{1}{p} + \left(\frac{-2}{p} + \frac{2}{T} \cdot \frac{1}{p^2}\right) \cdot e^{-\frac{T}{2}p} - \frac{2}{T} \cdot \frac{1}{p^2} \cdot e^{-Tp}$$

L 

$$g(t) = f(t) + f(t - T) + f(t - 2T) + f(t - 3T) + f(t - 4T) + f(t - 5T) + \dots$$

$$G(p) = F(p) \cdot \frac{1}{1 - e^{-Tp}}$$