

Compléter avec les transformées

$$\text{Si } f(t) = U(t) - U(t-2) \text{ alors } F(p) = \frac{1}{p} - \frac{1}{p} e^{-2p}$$

$$\text{Si } f(t) = t \times e^{-2t} \times U(t) \text{ alors } F(p) = \frac{1}{(p+2)^2}$$

$$\text{Si } f(t) = \sin(3t) \times e^{-t} \times U(t) \text{ alors } F(p) = \frac{3}{(p+1)^2 + 9}$$

$$\text{Si } f(t) = 2 \cos(5t) \times e^{-t} \times U(t) \text{ alors } F(p) = \frac{2(p+1)}{(p+1)^2 + 25}$$

$$\text{Si } f(t) = \cos\left(t - \frac{\pi}{4}\right) \times e^{-t+\frac{\pi}{4}} \times U\left(t - \frac{\pi}{4}\right) \text{ alors } F(p) = \frac{p+1}{(p+1)^2 + 1} \times e^{\frac{-p\pi}{4}}$$

Compléter avec les originaux

$$\text{Si } F(p) = \frac{1}{p^2 + 9} \text{ alors } f(t) = \frac{1}{3} \times \sin(3t) \times U(t)$$

$$\text{Si } F(p) = \frac{1}{(p+9)^2} \text{ alors } f(t) = t \times e^{-9t} \times U(t)$$

$$\text{Si } F(p) = \frac{1 - e^{-p}}{p^2} \text{ alors } f(t) = t \times U(t) - (t-1) \times U(t-1)$$

$$\text{Si } F(p) = \frac{1}{p+9}(1 - 2e^{-p} + e^{-2p}) \text{ alors } f(t) = e^{-9t} \times U(t) - 2e^{-9(t-1)} \times U(t-1) + e^{-9(t-2)} \times U(t-2)$$

$$\text{Si } F(p) = \frac{p+2}{(p+2)^2 + 5} \text{ alors } f(t) = \cos(t\sqrt{5}) \times e^{-2t} \times U(t)$$