

EXERCICE 1 Dessiner une fonction.

1. A base d'échelon.

- a. $U(t) = \begin{cases} 1 & \text{si } t \geq 0 \\ 0 & \text{sinon} \end{cases}$
- b. $f(t) = U(t - 1)$
- c. $f(t) = 2U(t)$
- d. $f(t) = U(t) - U(t - 2)$
- e. $f(t) = U(t) - U(t - \frac{\pi}{3}) - U(t - \frac{2\pi}{3}) + U(t - \pi)$
- f. $f(t) = \sin(t) \times (U(t) - U(t - \pi))$

2. A base de rampe.

- a. $f(t) = t \times U(t)$
- b. $f(t) = (t - 2) \times U(t - 2)$
- c. $f(t) = 2 \times t \times U(t)$
- d. $f(t) = t \times U(t) - (t - 2) \times U(t - 2)$
- e. $f(t) = t \times U(t) - 2(t - 1) \times U(t - 1)$
- f. $f(t) = t \times U(t) - 2(t - 1) \times U(t - 1) + (t - 2) \times U(t - 2)$
- g. $f(t) = t \times (U(t) - U(t - 2))$
- h. $f(t) = t \times U(t - 1)$
- i. $f(t) = t \times U(t) - U(t - 1)$

EXERCICE 2 Reconnaître un graphe

