

Exercice 1:

$$U_m = \frac{1,2^m}{m+1}$$

$$1. U_0 = \frac{1,2^0}{0+1} = \frac{1}{1} = 1$$

$$U_1 = \frac{1,2^1}{1+1} = \frac{1,2}{2} = 0,6$$

$$U_2 = \frac{1,2^2}{2+1} = \frac{1,44}{3} = 0,48$$

$$2. U_m = \frac{1,2^m}{m+1} \quad U_{m+1} = \frac{1,2^{m+1}}{m+2} \quad U_{m+1} - U_m = \frac{1,2^{m+1}}{m+2} - \frac{1,2^m}{m+1}$$

$$U_{m+1} - U_m = \frac{1,2^{m+1}(m+1)}{(m+2)(m+1)} - \frac{1,2^m(m+2)}{(m+1)(m+2)}$$

$$= \frac{1,2^{m+1}(m+1) - 1,2^m(m+2)}{(m+2)(m+1)}$$

$$= \frac{1,2^m(1,2(m+1) - (m+2))}{(m+2)(m+1)}$$

$$a = 1,2 \quad -b = (m+2) \quad m = (m+1) \\ b = -(m+2)$$