

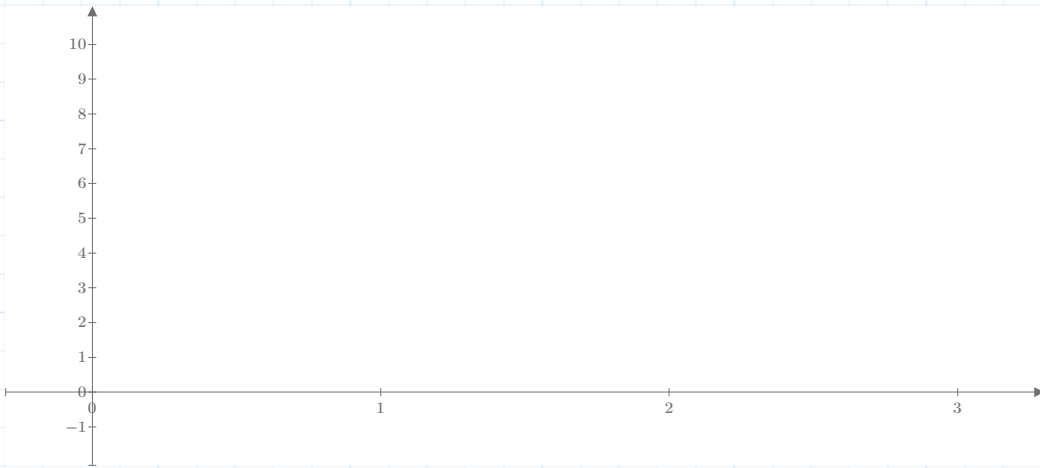
$$x := \begin{bmatrix} 0 \\ 0 \\ 5 \\ 8.6602 \\ 10 \\ \vdots \end{bmatrix}$$

$$\Delta t := 0.1 \quad i := 0..10$$

$$m := 0.2533 \quad k := 10 \quad c := 0$$

$$D(m, c, k, \Delta t, x) := \left\| \begin{array}{l} kbar \leftarrow \frac{m}{\Delta t^2} + \frac{c}{2 \cdot \Delta t} \\ a \leftarrow \frac{m}{\Delta t^2} + \frac{c}{2 \cdot \Delta t} \\ b \leftarrow k - \frac{2 \cdot m}{\Delta t^2} \\ u_0 \leftarrow 0 \\ udot_0 \leftarrow 0 \\ udotdot_0 \leftarrow \frac{x_0 - c \cdot udot_0 - k \cdot u_0}{m} \\ u_{-1} \leftarrow u_0 - \Delta t \cdot udot_0 + \frac{\Delta t^2}{2} \cdot udotdot_0 \\ \text{for } i \in 0..10 \\ \left\| \begin{array}{l} Pbar_i \leftarrow x_i - a \cdot u_{i-1} - b \cdot u_i \\ \Delta u_i \leftarrow \frac{Pbar_i}{kbar} \\ u_{i+1} \leftarrow u_i + \Delta u_i \end{array} \right. \\ umax \leftarrow u \end{array} \right.$$

$$D(m, c, k, \Delta t, x) = ?$$



$D(i)$

$i \cdot \Delta t$