Quiz #3

- Input: A stream $x_1, \cdots, x_n$,each x_j has a weight $w_j > 0$

- Algorithm

  - let W be the sum of $x_i's$ seen so far. Select the current element x_{j+1} by probability $\frac{w_{j+1}}{W+w_{j+1}}$

- Need to show if $x_i \ (i < j)$ is in reservoir then selected as a sample with probability $\frac{w_i}{W+w_{j+1}}$

- How to handle *k samples* without replacement?