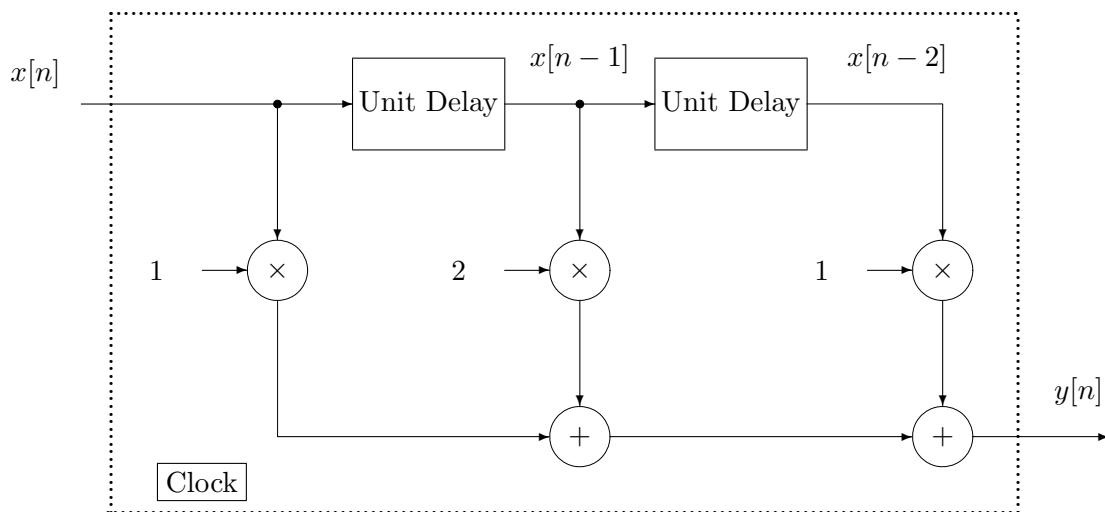This homework set is for practise for the exam. You do not have to hand in your work.
Relevant reading: Chapter 5.4

1. Draw two different implementations (block diagrams) of the following filter

$$y[n] = \frac{1}{4}x[n] + \frac{1}{2}x[n-1] + \frac{1}{4}x[n-3]\big).$$

2. Answer for the LTI filter given below.

   (a) Find the impulse response.

   (b) Find the response $y[n]$ to the following input.

$x[n]$