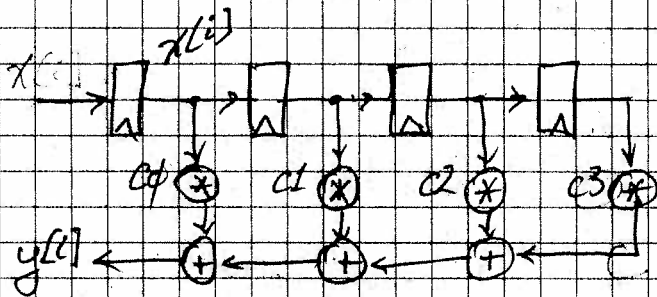
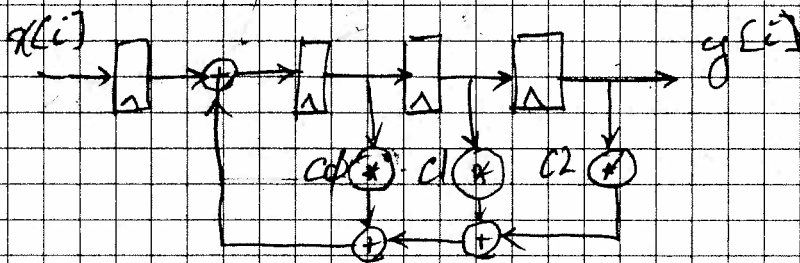


## Pipelining/Retiming Example #1



for ( $i=3; i < N; i++$ ) {  
 $y[i] = c_0 \cdot x[i] + c_1 \cdot x[i-1] + c_2 \cdot x[i-2] + c_3 \cdot x[i-3]$   
 (4 cycles to get started)

## Example #2



$t = t_1 = t_2 = 0;$   
 for ( $i=0; i < N; i++$ ) {  
 $y[i] = t_2;$   
 $t_2 = t_1;$   
 $t_1 = t;$   
 $t = x[i] + c_0 \cdot t_1 + c_1 \cdot t_2 + c_2 \cdot y[i];$   
 }