7.4 We have: $T_{\min }=\max \left\{\frac{5}{1}, \frac{10}{2}, \frac{15}{3}\right\}=5$

We need 1 adder, 1 multiplier of the first type, 2 of the second and 3 of the third type. We introduce delays into the critical path so that is broken into smaller pieces. This is often call for retiming. The degree of utilization of the adder is $60 \%$ and it is $60 \%, 70 \%$, and $80 \%$ of the multipliers.


Retimed filter section.
mult 12 mult 12 mult 12 mult 7 mult 7 mult 3 adder


Feasible schedule

