

## Lab 6

| Step | Operation           | In R1           | In R2           | R1mul | R1en | R2mul | R2en | InSel | ASel | BSel | Done? | NextStep |
|------|---------------------|-----------------|-----------------|-------|------|-------|------|-------|------|------|-------|----------|
| 0    | $R1 = X$            | $X$             | $?$             | 0     | 1    | x     | 0    | 00    | 11   | 00   | 0     | 1        |
| 1    | $R2 = R1 \times B$  | $X$             | $BX$            | x     | 0    | 1     | 1    | 10    | 01   | 11   | 0     | 2        |
| 2    | $R1 = R1 \times R1$ | $X^2$           | $BX$            | 1     | 1    | x     | 0    | xx    | 01   | 01   | 0     | 3        |
| 3    | $R1 = R1 \times A$  | $AX^2$          | $BX$            | 1     | 1    | x     | 0    | 01    | 11   | 01   | 0     | 4        |
| 4    | $R2 = R2 + R1$      | $AX^2$          | $AX^2 + BX$     | x     | 0    | 0     | 1    | xx    | 01   | 10   | 0     | 5        |
| 5    | $R2 = R2 + C$       | $AX^2$          | $AX^2 + BX + C$ | x     | 0    | 0     | 1    | 11    | 11   | 10   | 0     | 6        |
| 6    | $R2 = R1$           | $AX^2 + BC + C$ | $AX^2 + BX + C$ | 0     | 1    | x     | 0    | xx    | 10   | 00   | 0     | 7        |
| 7    | hold                | $AX^2 + BC + C$ | $AX^2 + BC + C$ | x     | 0    | x     | 0    | xx    | xx   | xx   | 1     | 7        |