

Iterative Multiplication

Engineering 304 Lab

Long-Hand Multiplication

- Multiplicand = 0b1110

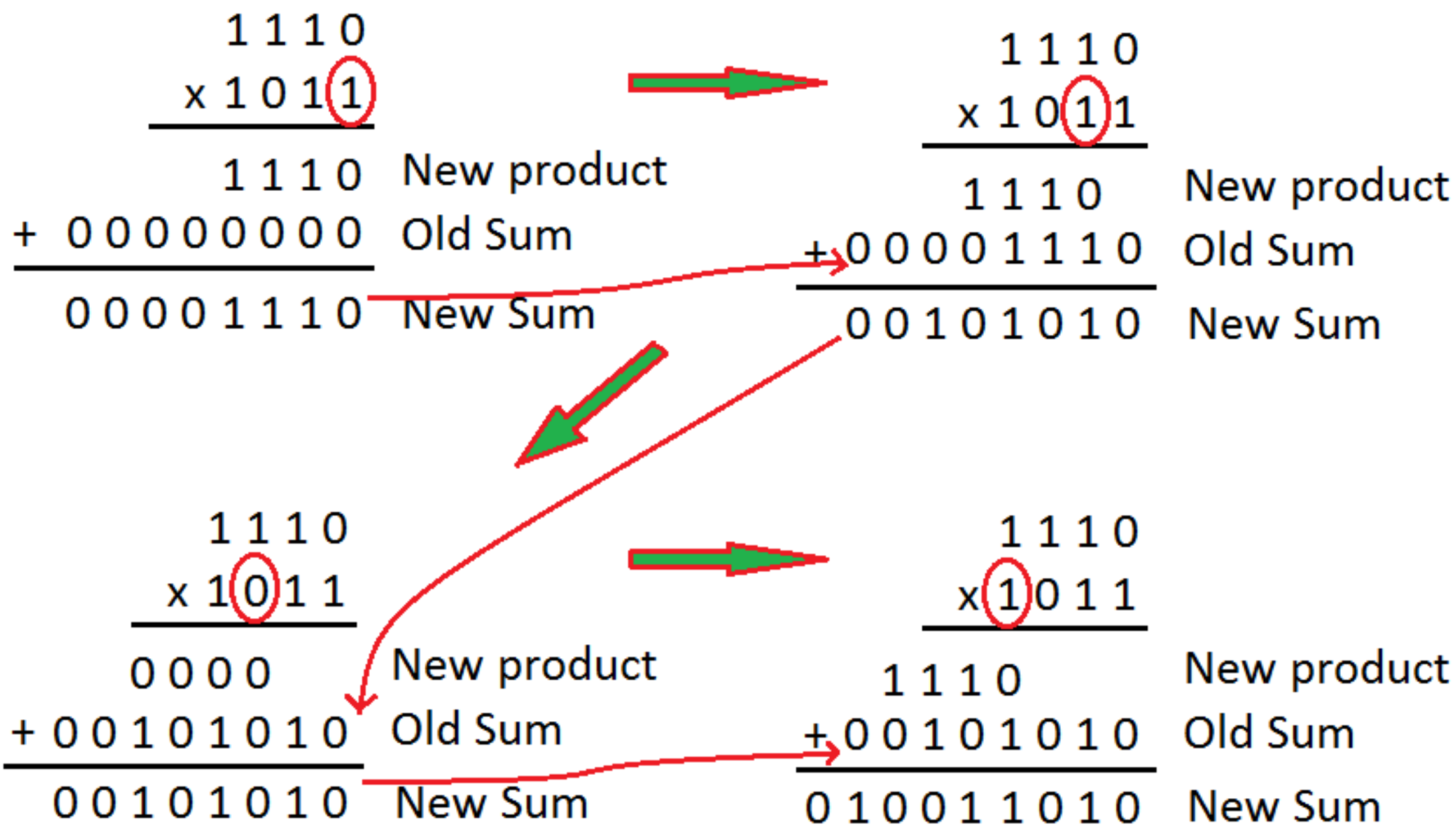
- Multiplier = 0b1011

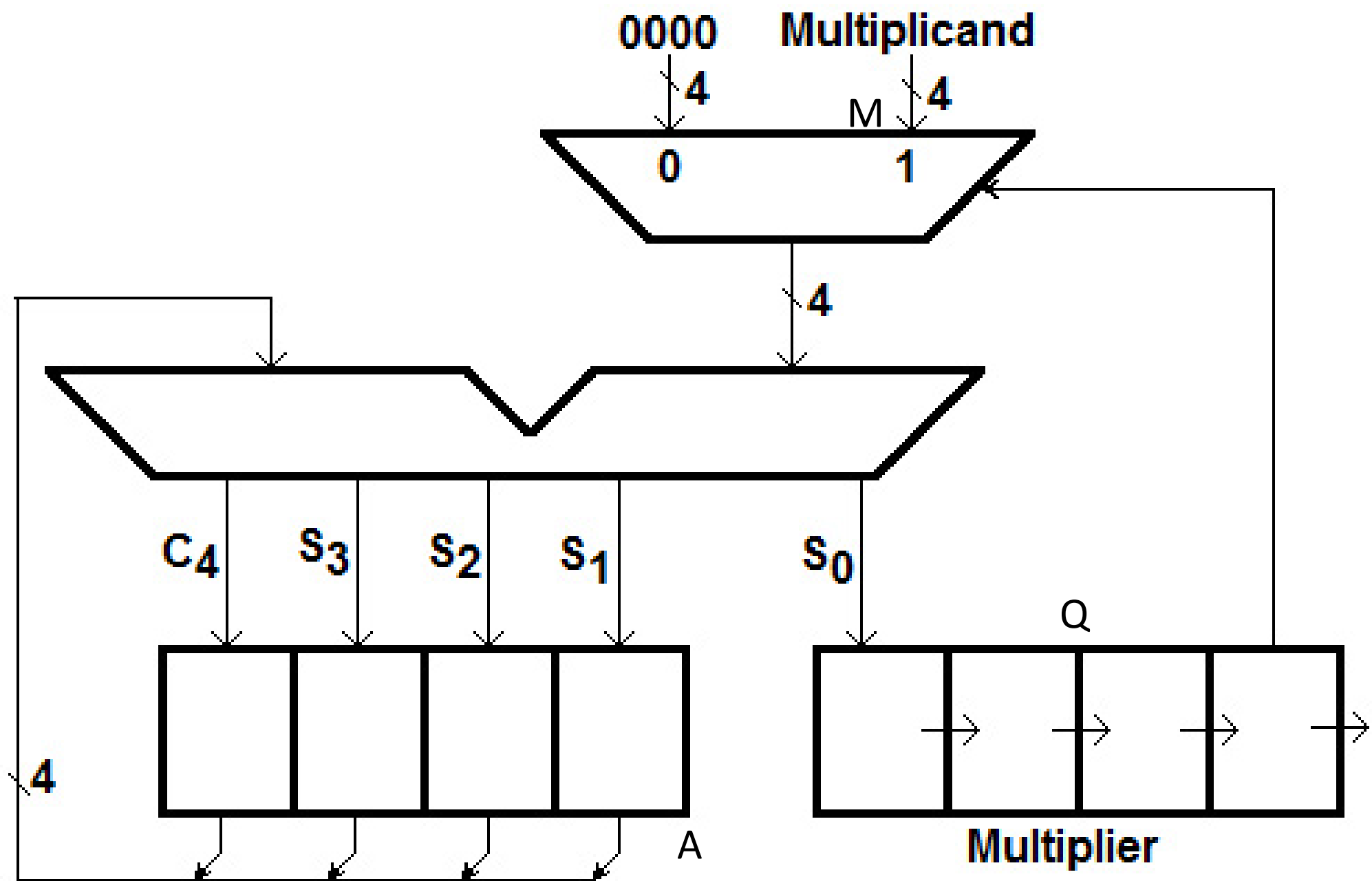
- $14 * 11 = 154$

- $0b1110 * 0b1011$

$= 0b010011010 = 128 + 16 + 8 + 2$

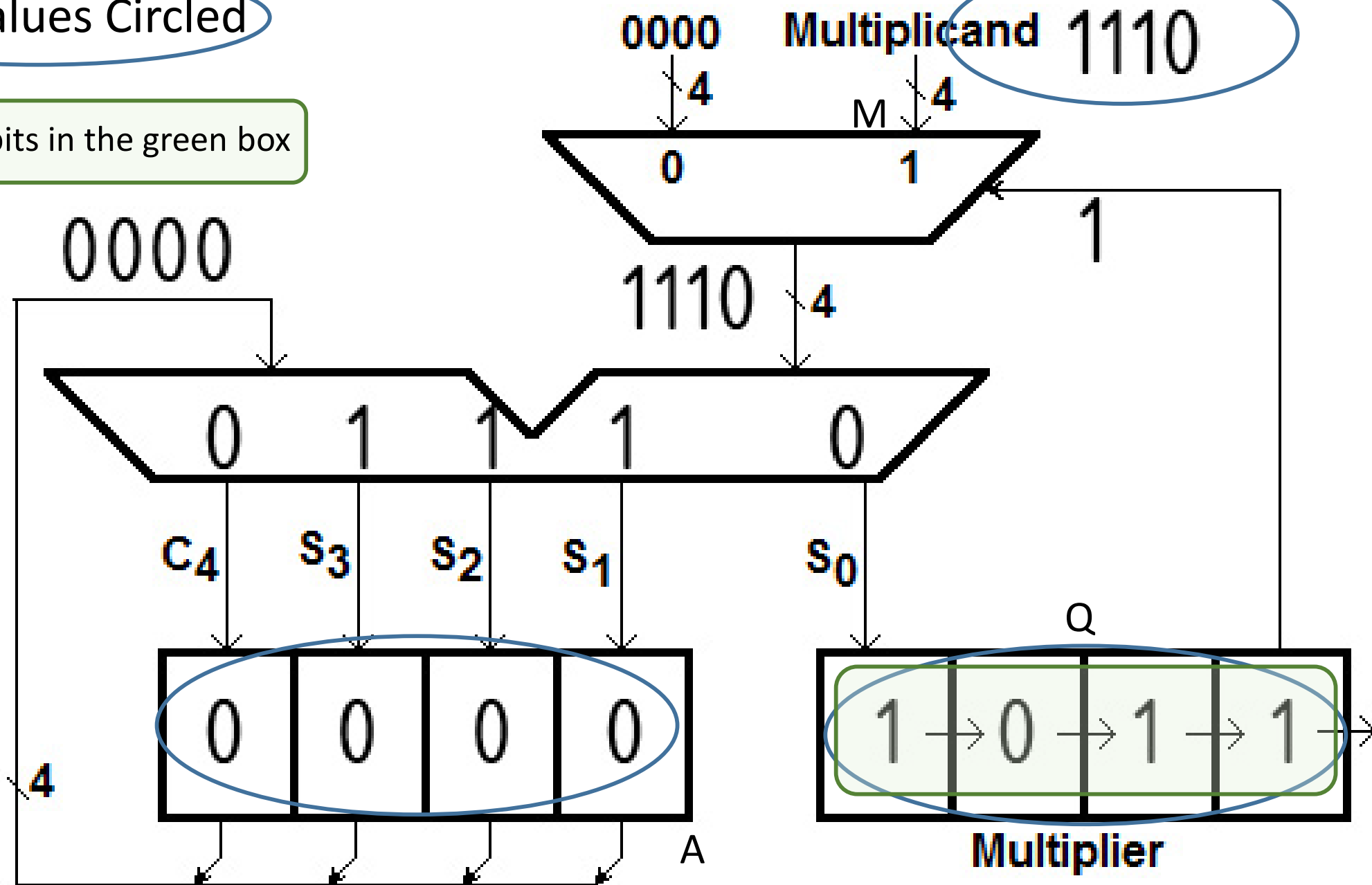
$$\begin{array}{r} 1110 \\ \times 1011 \\ \hline 1110 \\ 1110 \\ 0000 \\ 1110 \\ \hline 010011010 \end{array}$$



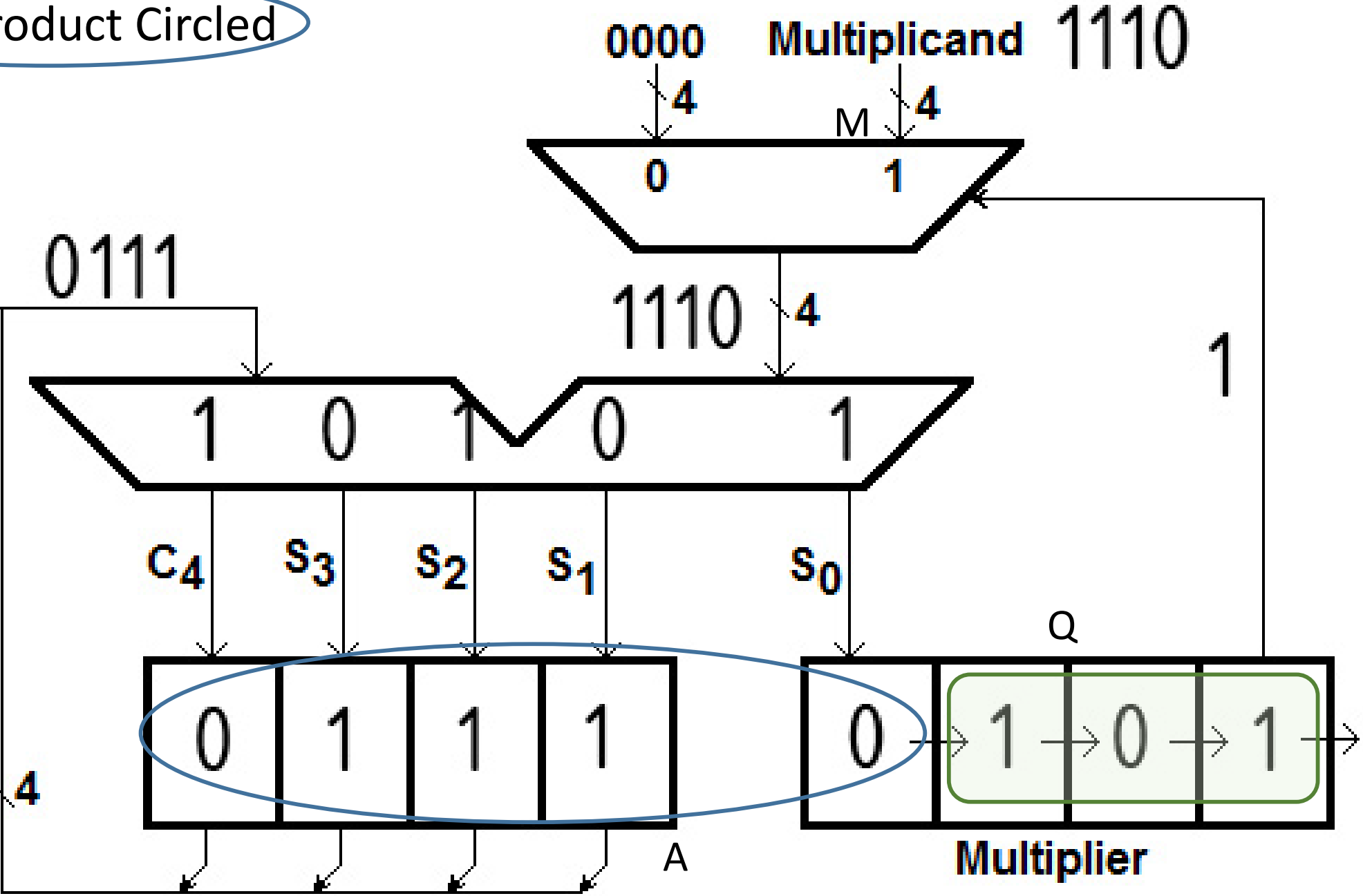


Initial Values Circled

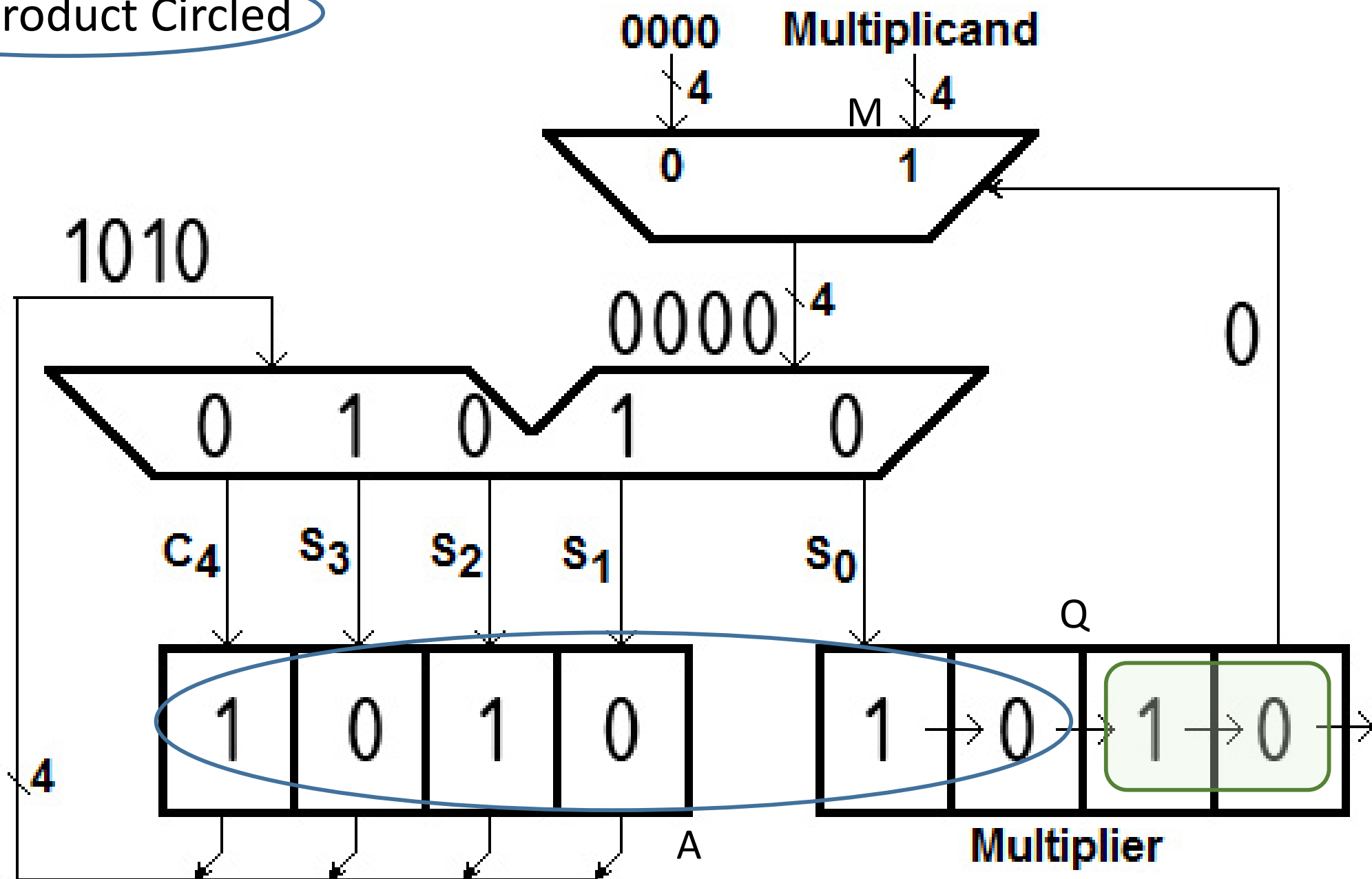
Multiplier bits in the green box



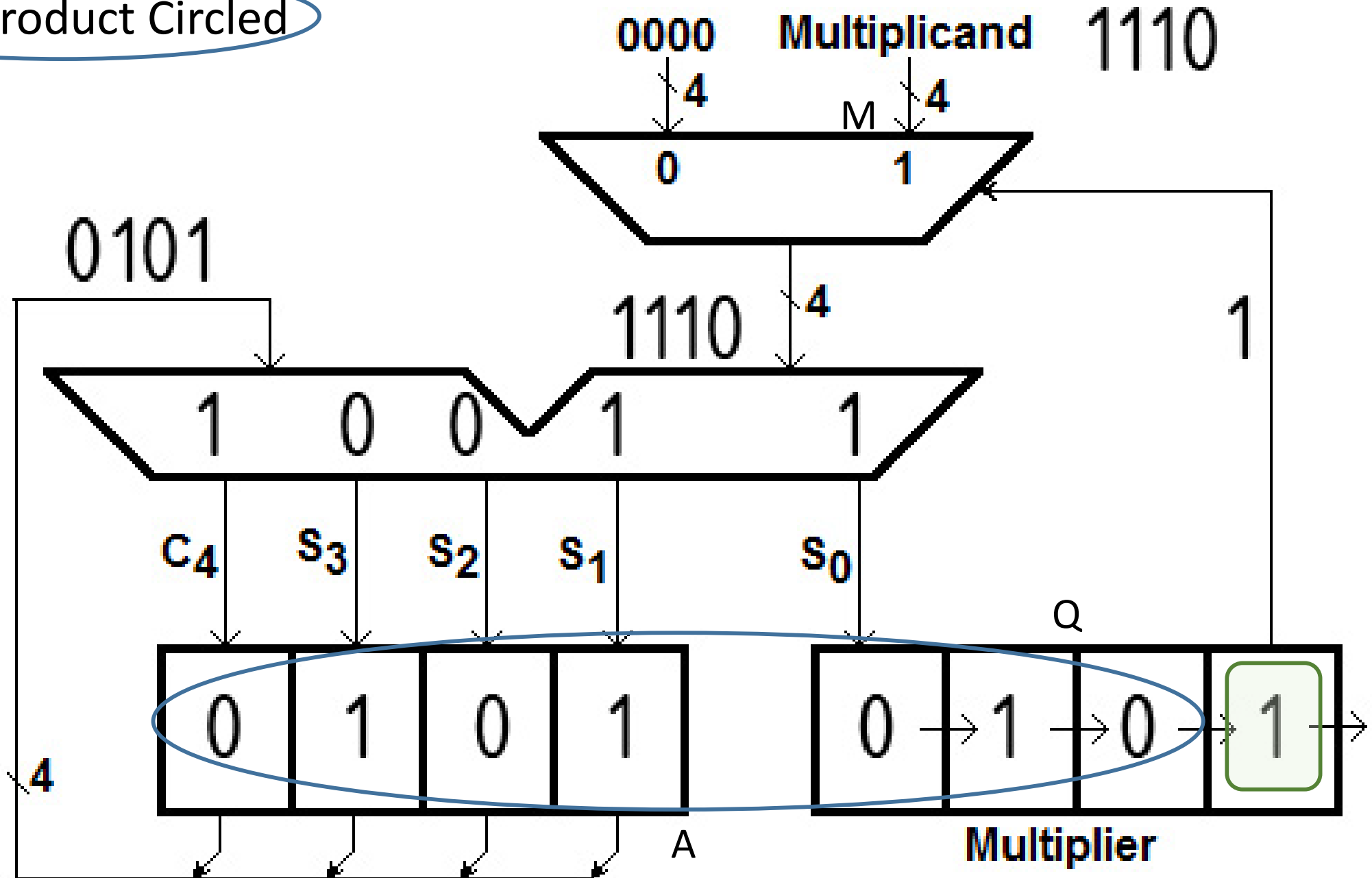
Partial Product Circled



Partial Product Circled



Partial Product Circled



Final Answer Circled

$14 * 11 = 154$
Done!

