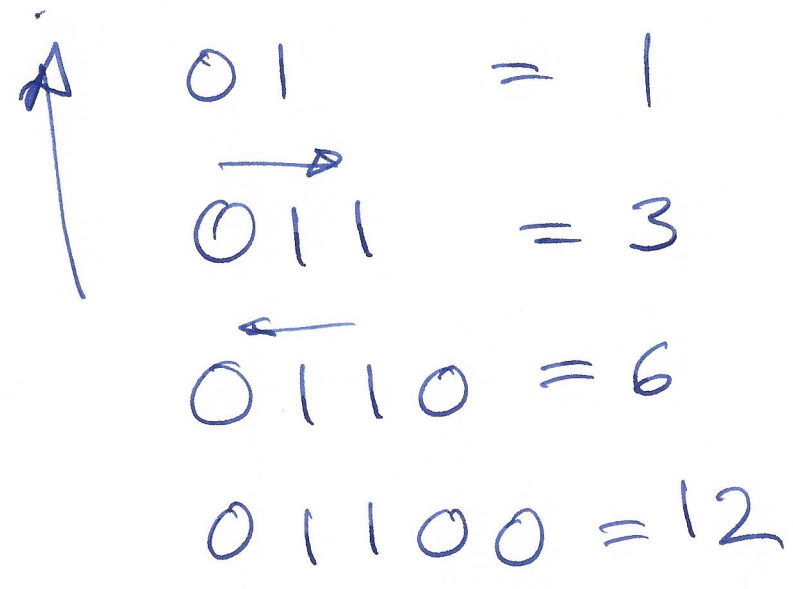


Shifting
to the
right
integer
divides
by 2



↓ add
zeros
doubles
the
number

011 shift right
→ 01

011 shift left
→ 0110

$$n = \textcircled{011} \times 3$$

$$\begin{array}{r} 0110 = 2 \times n \\ + 011 = 1 \times n \\ \hline \textcircled{1001} = 3 \times n \end{array}$$

	b_4	b_6	b_5	b_4	b_3	b_2	b_1	b_0
A_i	1	0	1	0	0	1	0	0
B_i	0	1	1	0	1	1	1	0
C_i	1	1	0	1	1	0	0	0
S_i	0	0	0	1	0	0	1	0
g_i	0	0	1	0	0	1	0	0
P_i	1	1	1	0	1	1	1	0
C_{i+1}	1	1	1	0	1	1	0	0

Carry generated at b_2 dies at b_4 , which does not propagate

generate propagate

Carry generated at b_5 propagated to the output

$$S_i = A_i \oplus B_i \oplus C_i$$

$$g_i = A_i \cdot B_i$$

$$P_i = A_i + B_i$$