

Bit

And →

or

Not

Left Shift

Right Shift

And → input all true (1) → output true →
False (0)

→ 1 0 1 0 1 1
+ 1 0 0 1 0 1 1 0

1 0 0 0 0 0 1 0

And → Add X
Multiple

→ 1 0 1 0 1 1
0 1 0 1 1 0 1 0

1 1 0 1 0

1 + 0 = 1 X

And 1 X 0 0 ✓
1 X 1 1 ✓

And

1 1 0 1 1 0 1 1
0 0 1 1 0 1 1 1

1 1 1 1 1 1 1 1
Ans

Left Shift

Left Shift

$A \ll 2 \text{ bit}$

A ← 1 0 1 0 1 1
A ← 1 0 0 0 0 0 0 0
2⁷ 2⁶ 2⁵ 2⁴ 2³ 2² 2¹ 2⁰

ex

Trick Left Shift

Output > Input
Input × 2ⁿ → bit

OR → And

One true → True
Input

		OR
1	0	1
1	1	1
0	1	1
0	0	0

Not → opposite

1 ↔ 0
0 ↔ 1

1 → 1 0 1 0 1 1 0

0 → 0 1 0 1 0 0 1 Ans

$$\Rightarrow 4 \times 2^2 \quad \text{4x4x} \quad \underline{\underline{16 \text{ Ans}}}$$