

...001 | 10

| . v | , | . | - - -

1 | 10 | | |

$0x2 = 0010b$

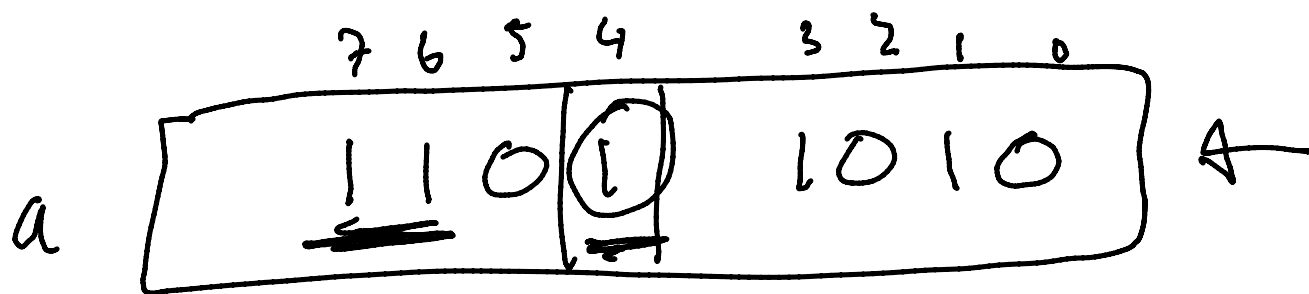
AND

$$4 + 1 = 5$$

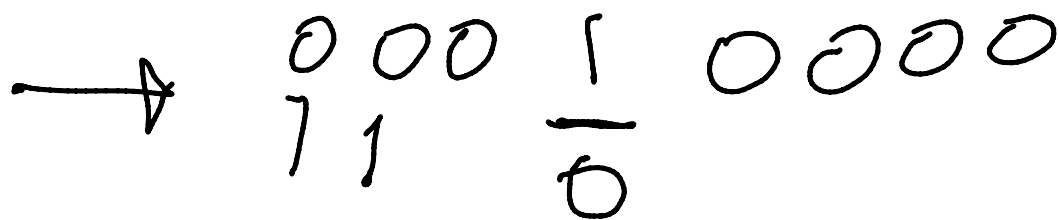
$$8 + 2 = 10$$

16	8	4	2	1
	0	1	0	1
&	1	0	1	0
=	0	0	0	0

$$\begin{array}{r} \textcircled{0} \textcircled{0} \textcircled{0} 1 \\ \& \textcircled{0} \textcircled{0} \textcircled{0} 1 1 \\ \hline 0 0 0 1 \end{array}$$



int a;



OR

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

5
10

15

0001

1 0011

0011

→ 3

$$3^1 = 4$$

$$\begin{array}{r}
 \begin{array}{cccc}
 0 & 0 & 0 & 1 \\
 \hline
 1 & 1 & 0 & 0
 \end{array}
 \quad
 \begin{array}{cccc}
 0 & 0 & 0 & 0 \\
 \hline
 1 & 0 & 1 & 0
 \end{array} \\
 \hline
 1 & 1 & 0 & 1 \quad 1 & 0 & 1 & 0 \\
 \hline
 \end{array}$$

$a \mid b$	$a \mid b$	$\neg(a \mid b)$	$\neg(a \wedge b)$
0 0	0	1	1
0 1	1	0	1
1 0	1	0	1
1 1	1	0	0

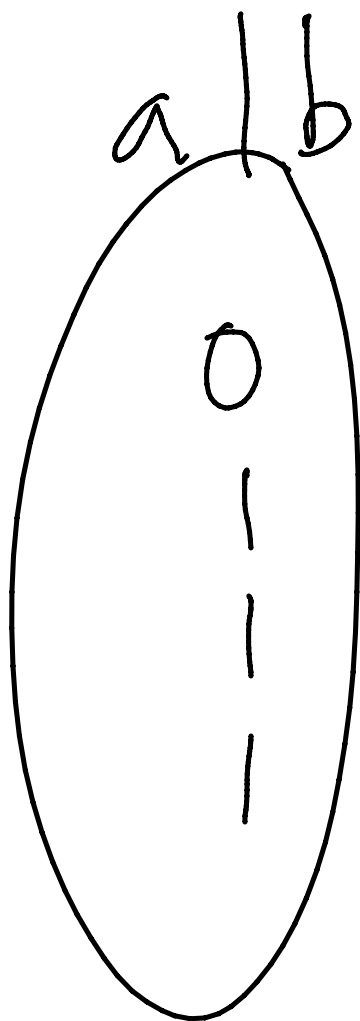
SHIFT

$$\begin{array}{r} 0010 \\ \gg 0001 \\ \hline 0010 \end{array}$$

Diagram illustrating a right shift operation. The number 0010 is shifted right by 1 position, resulting in 0001. The bit shifted out (0) is shown as 1.

$0010 \gg 2 = 0000$

$0010 \ll 2 = 1000$



$\neg a$

1
1
0
0

