

C cats & D dogs

(N) number of legs walkable.

$$\text{Not } 04 == 0$$

$$\text{max no} = (D+C) \times 4$$

$$\text{min no} = \begin{cases} (C > 2 \times D) \{ \\ ((C - 2 \times D) + D) \times 4 \\ (C - D) \times 4 \end{cases}$$

if C (above) < 2D cats  
D Dogs and else { D x 4

$$N \geq \text{min no} \ \&\& \ N \leq \text{max no} \ \&\& \ \text{Not } 04 == 0$$

min part

C cats / D dogs

max no. of cat we can put over dogs

$$\hookrightarrow \min(C, 2 \times D)$$

$$\text{Remaining cat} \Rightarrow C - \min(C, 2 \times D)$$

$$\text{min leg} = ((C - \min(C, 2 \times D)) + D) \times 4$$

And operator | OR | xor



And

1	1	→	1
1	0	→	0
0	1	→	0
0	0	→	0

OR

1	1	→	1
1	0	→	1
0	1	→	1
0	0	→	0

XOR

1	1	→	0
1	0	→	1
0	1	→	1
0	0	→	0

$$5 \wedge 10$$

$$\Rightarrow 4 + 1$$

$$\begin{array}{r} 0000101010101010 \rightarrow 5 \\ 0000110101010101 \rightarrow 10 \\ \hline \end{array}$$

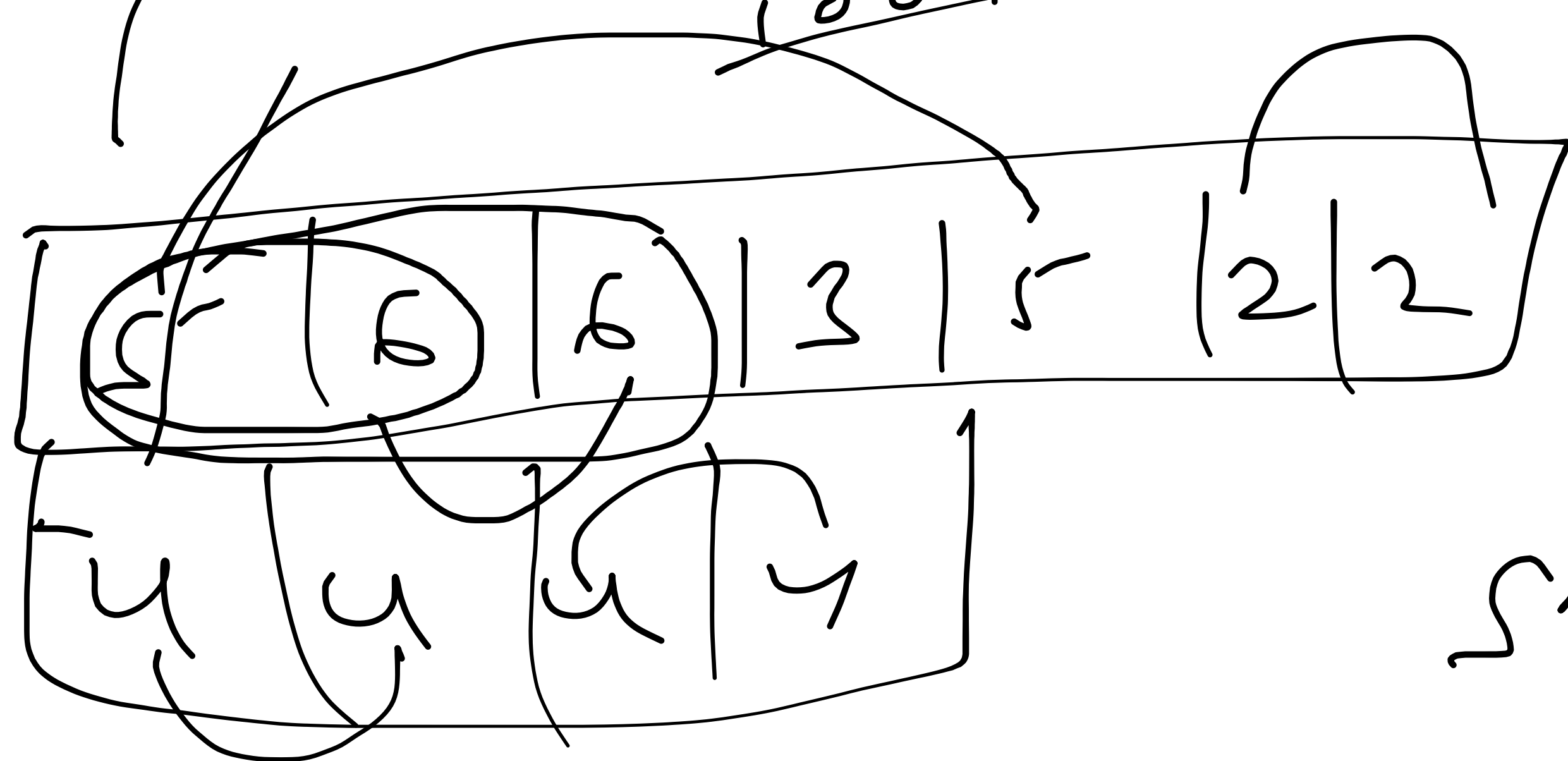
$$\begin{array}{r} 2222000000000000 \rightarrow 0 \\ 2222000000000000 \rightarrow 15 \\ 0000111111111111 \rightarrow 15 \end{array}$$

$$\begin{array}{r} 5 \& 10 \\ 5 \mid 10 \\ \hline 5 \wedge 10 \end{array}$$

$$a \wedge a = 0$$

$$a \wedge 0 = a$$

$$\begin{array}{r} 1010111 \\ 0000000 \\ \hline 1001111 \end{array}$$



$$5 \wedge 1 \wedge 6$$

$$5 \wedge 0 = 5$$

$$5 \wedge 3$$

$$1 \wedge 2 \wedge 2$$

$$5 \wedge 3$$