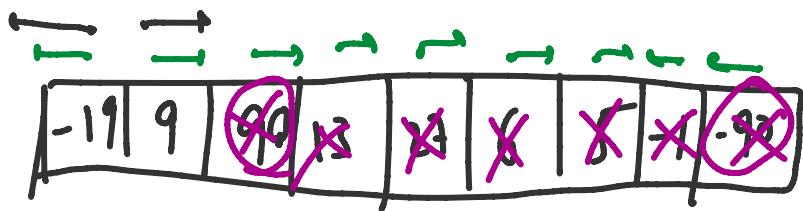
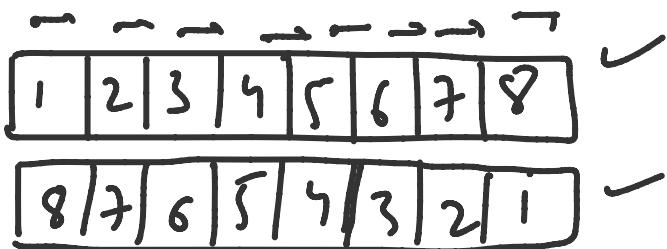
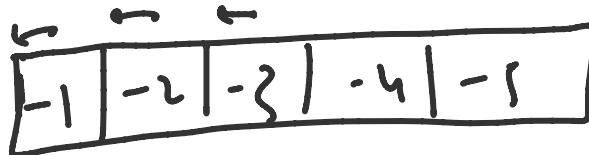
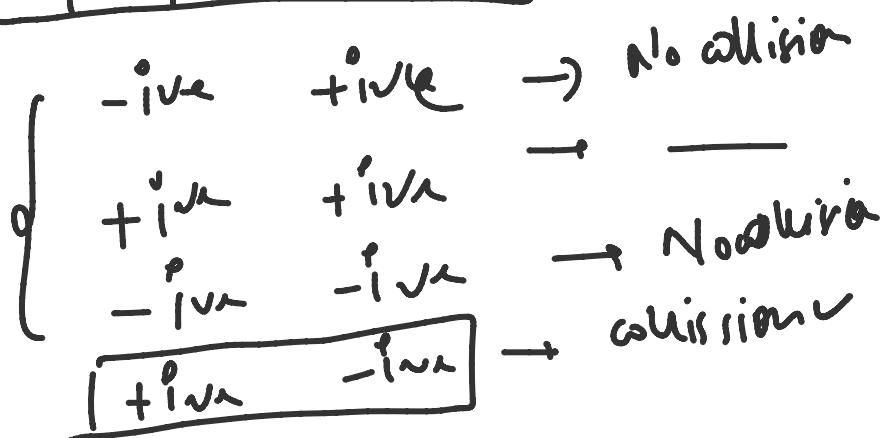
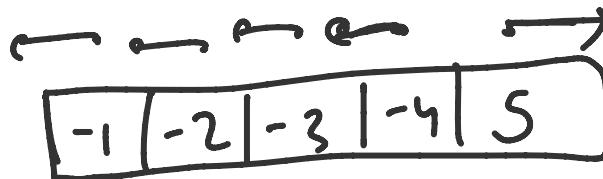
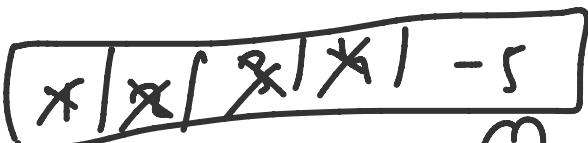


ast₁[] =

$$\%p = [-19, 9]$$

ast₁[] =

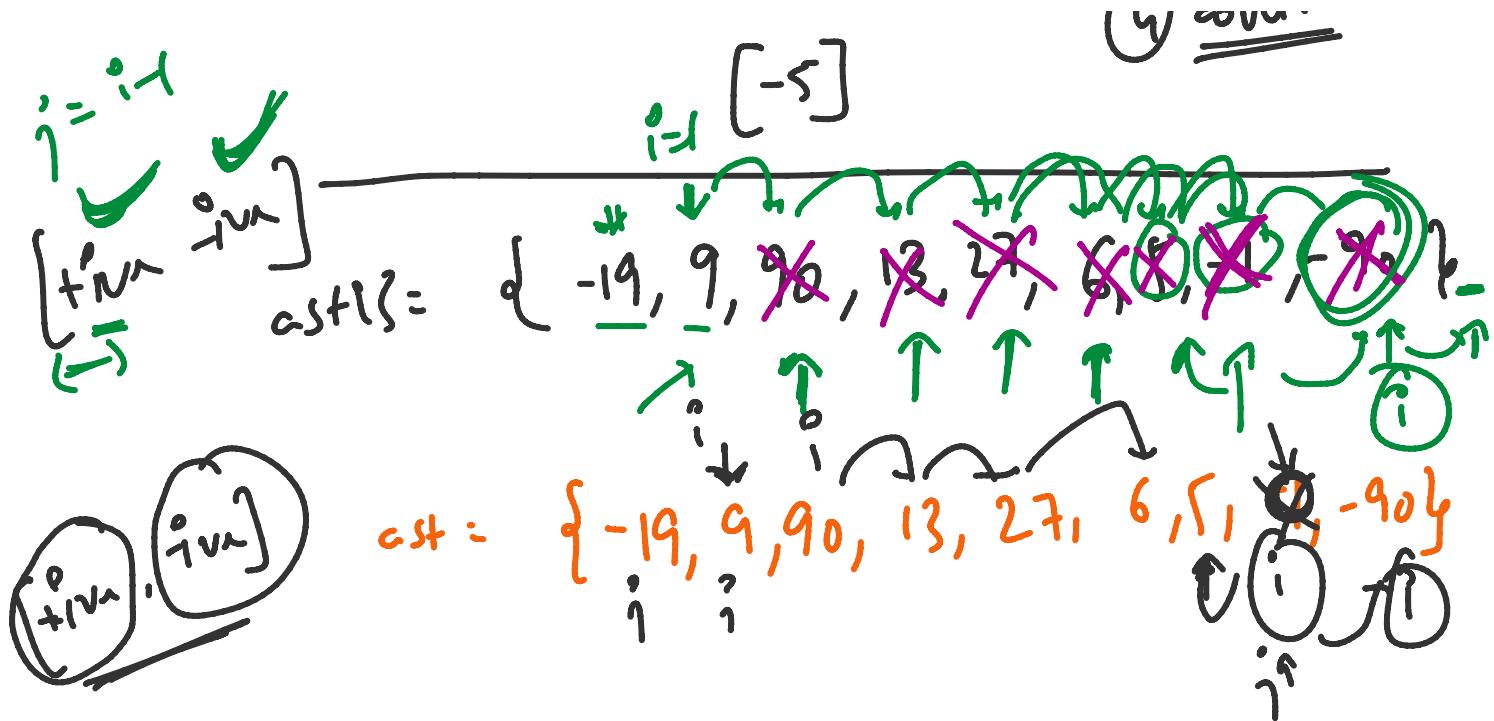
all elements are fine/no collision.

ast₂[] =ast₃[] :ast₄[] =

(4) collisions

.. :1 ..

[-5]



for (int $i=1$; $i < n$; $i++$)

{ $j = i-1$ collision condition
 while ($a[j] \geq 0 \wedge c[i] < 0$)

{ // collision
 // if $obs(c[:]) < c[i] \rightarrow c[i] = 0$.
 if ($xa[i] < 0$)
 { $a[i] = 0$
 break; }
 else if ($-1 \times c[i] = c[j]$)
 $c[i] = 0$
 $c[j] = 0$
 break;

else
→ $a[i] = 0;$
 $i--;$

}

for (int $i=0$; $i < n$; $i++$)

{ if $a[i] \neq 0$
out $\ll a[i]$

You are given an array in which each element is app. twice, except 2 elements, find out those elements.

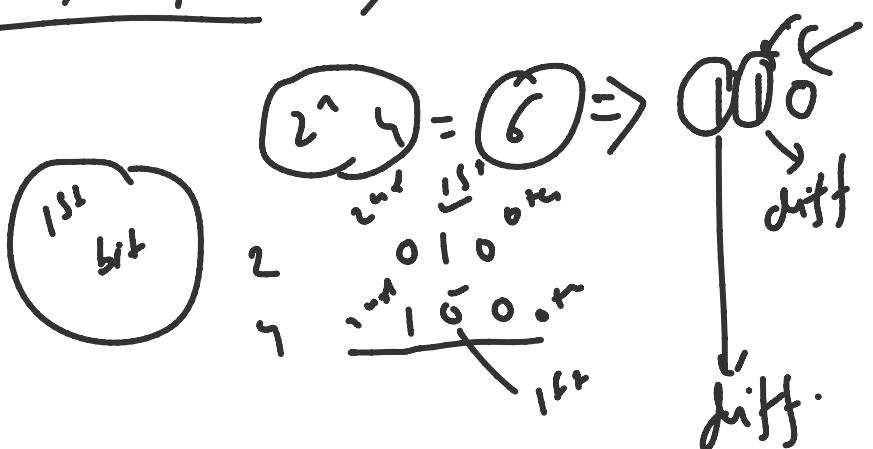
$O(n^2) \rightarrow$
 $O(n)$ → 1 2 3 4 3 1
→ { 'f', 'l', 'r', 'n', '<', '>' }
 2^n

$\begin{matrix} 100 \\ 10 \\ 110 \end{matrix} \rightarrow 6$

$681 \rightarrow 0$
 $682 \rightarrow 2$
 $683 \rightarrow 2$

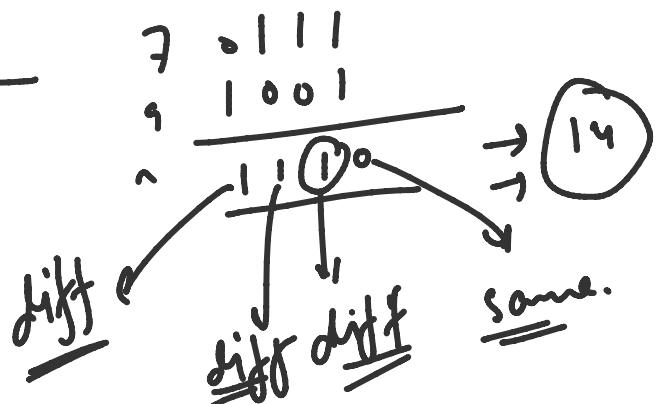
$$\begin{array}{r}
 110 \\
 + 0 \\
 \hline
 110
 \end{array}
 \quad
 \begin{array}{r}
 110 \\
 - 10 \\
 \hline
 010
 \end{array}
 \quad
 \begin{array}{r}
 110 \\
 - 010 \\
 \hline
 100
 \end{array}$$

$\text{arr} = [1, 2, 3, 4, 3, 1]$;



$5, 3, 5, 3, 7, 9$

1st bit

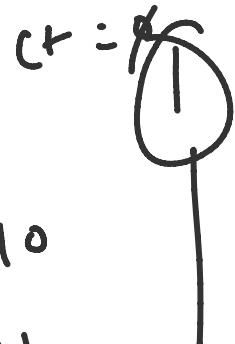


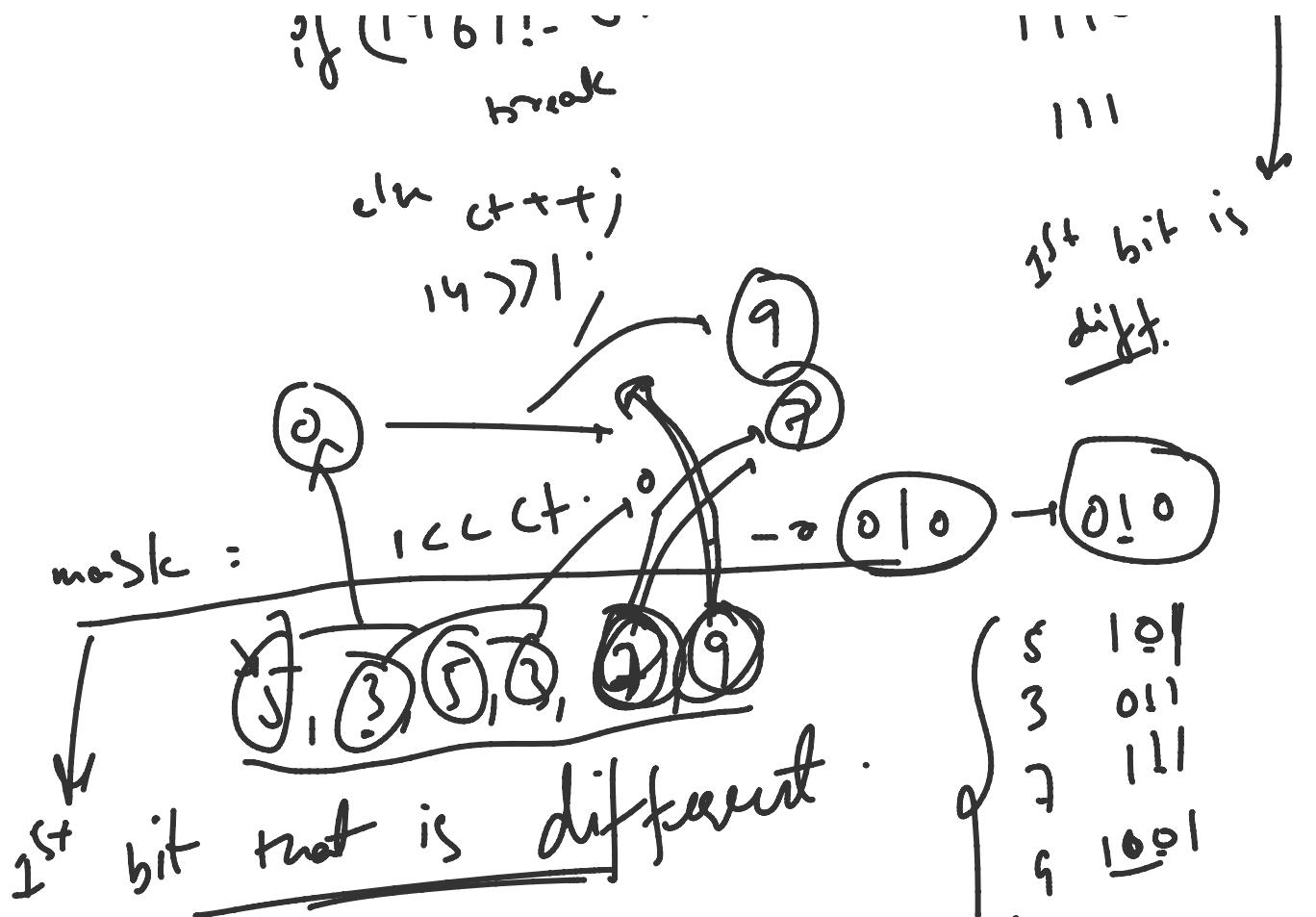
I will find out first bit that is different.

which (num)
if ($1481 \neq 0$) —

weak

1110
...





5	101
3	011
7	111
9	1001

$$\begin{aligned}
 562 &= \frac{101}{010} = 0 \\
 512 &= \frac{101}{010} = 7
 \end{aligned}$$

$$\begin{array}{r}
 101 \\
 -010 \\
 \hline
 111
 \end{array}$$

1st char.
 jinkai
 1st bit Set hair
 $\text{setchar} = 0$

jinkai
 1st bit set
 hair hair
 $\text{setchar} = 0$

$$\begin{array}{r}
 111 \\
 -010 \\
 \hline
 101 = 5
 \end{array}$$

if ($a[i] \& \text{mask} = 0$)
 1st bit unset

{ $c[i] \sim \text{mask}$ }

$$\begin{array}{r}
 0 \boxed{5} \\
 9 \boxed{7} \\
 \hline
 S \\
 S
 \end{array}$$

5, 3, 5, 3,
 7, 7

$$\begin{array}{r}
 101 \\
 -010 \\
 \hline
 0
 \end{array}$$

4

..

$\begin{array}{r} 010 \\ \times 0 \\ \hline 010 \end{array}$
 $\begin{array}{r} 011 \\ \times 0 \\ \hline 010 \end{array}$
 $\begin{array}{r} 010 \\ \times 0 \\ \hline 010 \end{array}$

dec $\xrightarrow{\text{a[3]}} 5$ selclub;
 $\begin{array}{c} 111 \\ \hline 010 \end{array} \rightarrow \text{st}$ $\begin{array}{c} 100 \\ \hline 010 \end{array}$

$\rightarrow 7, 5, 1$
 $\begin{array}{c} 010 \\ \hline 010 \end{array}$

$$\begin{array}{r} us = 19 \\ s = 17 \end{array}$$

$\begin{array}{r} 2^1, 2^2, 2^3, 2^4, 2^5, 2^6, 2^7 \\ \hline 1, 2, 4, 8, 16, 32, 64 \end{array}$

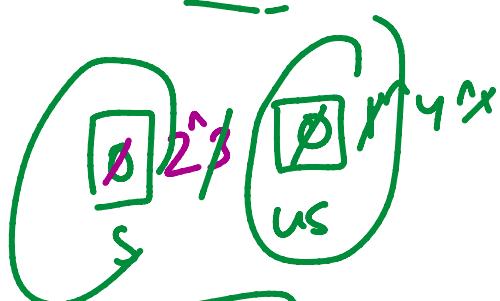
$$2^7 = 110$$

$$\begin{array}{r} 001 \\ \times 010 \\ \hline 010 \end{array} = 0.$$

$\begin{array}{r} 010 \\ \times 1 \\ \hline 010 \end{array}$ mask.
 $a[i] \& b$ mask.

$$\begin{array}{r} 010 \\ \times 010 \\ \hline 010 \end{array}$$

$\begin{array}{r} 1 \\ 2 \\ 3 \\ 4 \end{array}$ $\begin{array}{r} 2 \\ 2 \\ 2 \\ 2 \end{array}$



$$\begin{array}{r} s = 2 \\ us = 4 \end{array}$$

$$\boxed{f_0(n), f_0(1)}$$