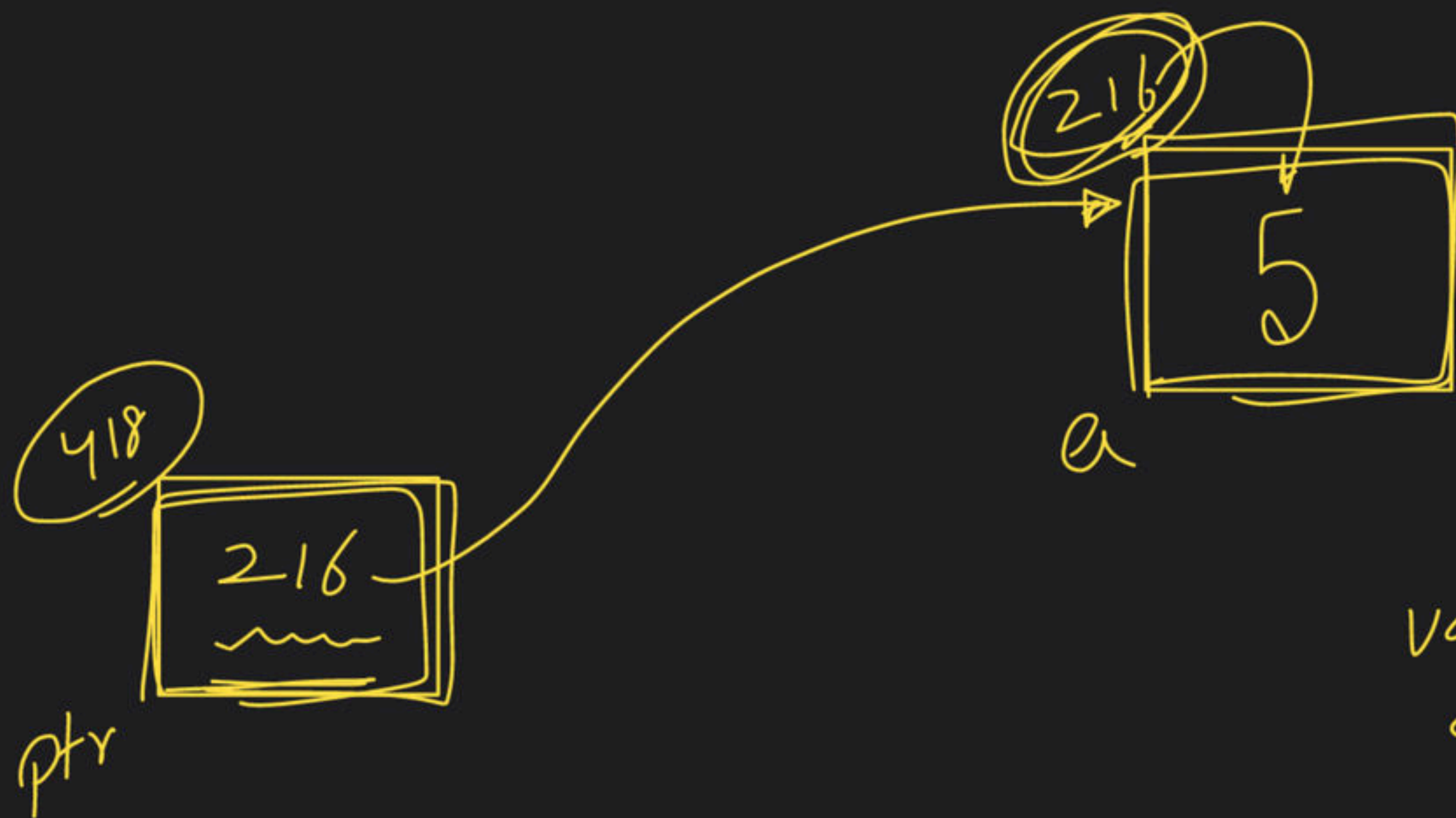


Pointers - Class 2

Special class

int a = 5;
int * ptr = &a




a → 5
&a → 216
ptr → 216
*ptr = 5
&ptr → 418

Value stored
at location
~~ptr~~ 216

char ch[10] = {'a', 'b'}

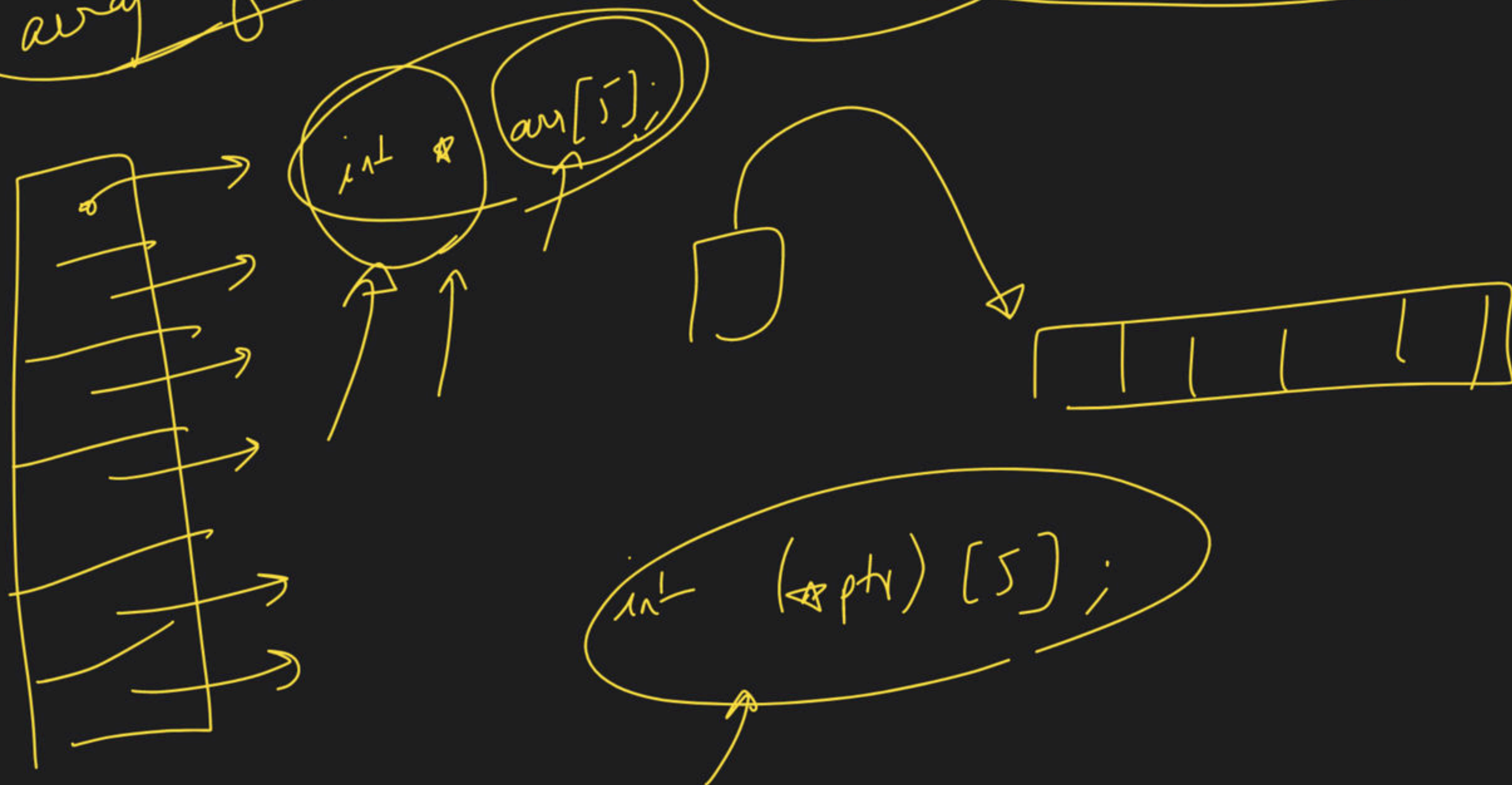
char * ptr = &ch



integer array

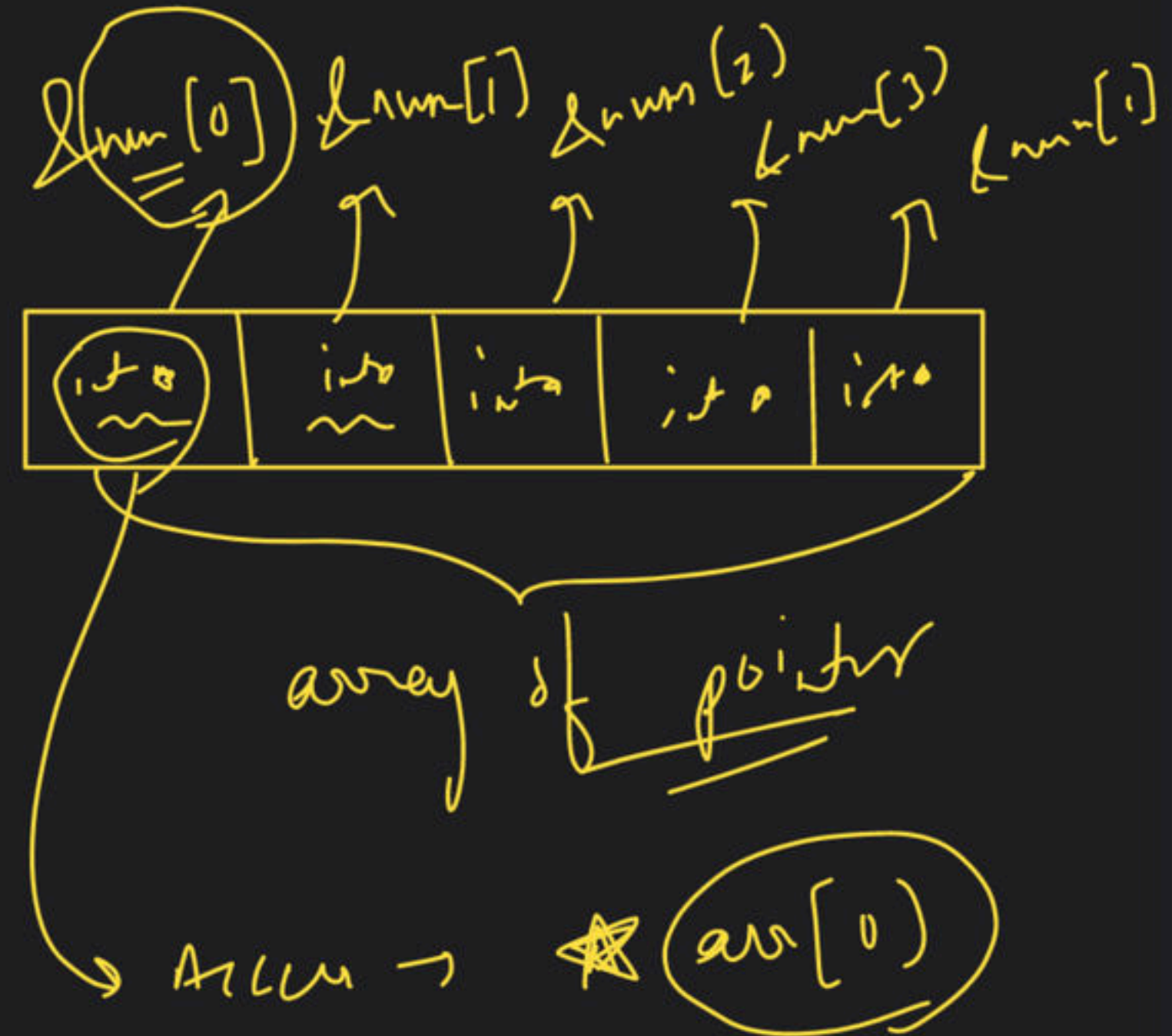
array is pointer

Pointer to an array



int arr[5]

int * arr[5]



→ Array of pointer

→ $\text{int}^* \text{arr}[4]$

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



→

$\text{arr}[0]$	→	$\&\text{num}[0]$
$\text{arr}[1]$	→	$\&\text{num}[1]$
$\text{arr}[2]$	→	$\&\text{num}[2]$

→ Access →

$\star \text{arr}[0]$
 $\star \text{arr}[1]$
 $\star \text{arr}[2]$

~~$\&\text{arr}$
 $\&\text{arr}[0]$
 arr~~

pointer to an array

doubt \rightarrow detailed
 \rightarrow pointer type doubt

$\text{int} * \text{ptr} = \boxed{\text{arr}}$

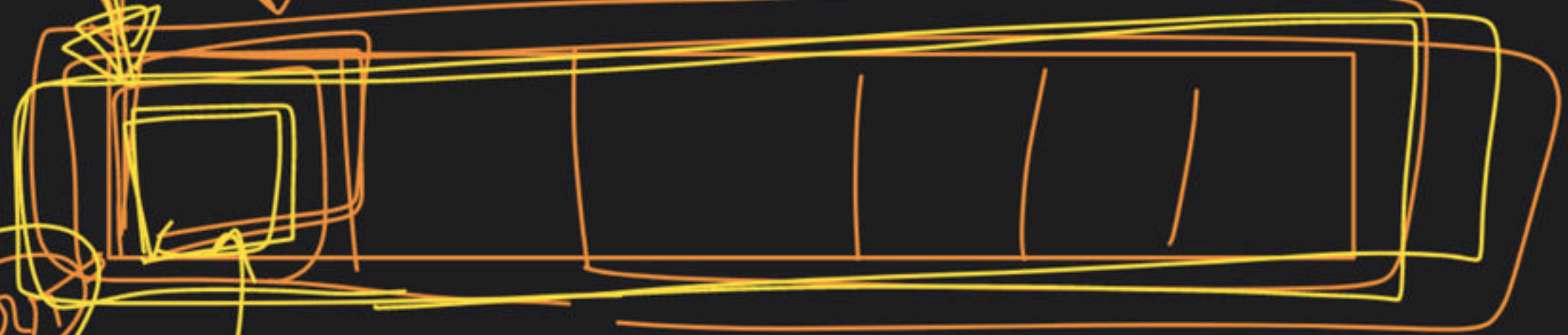
$\text{int} * \text{ptr} = \text{arr}$

ptr

$= \text{arr}$

arr

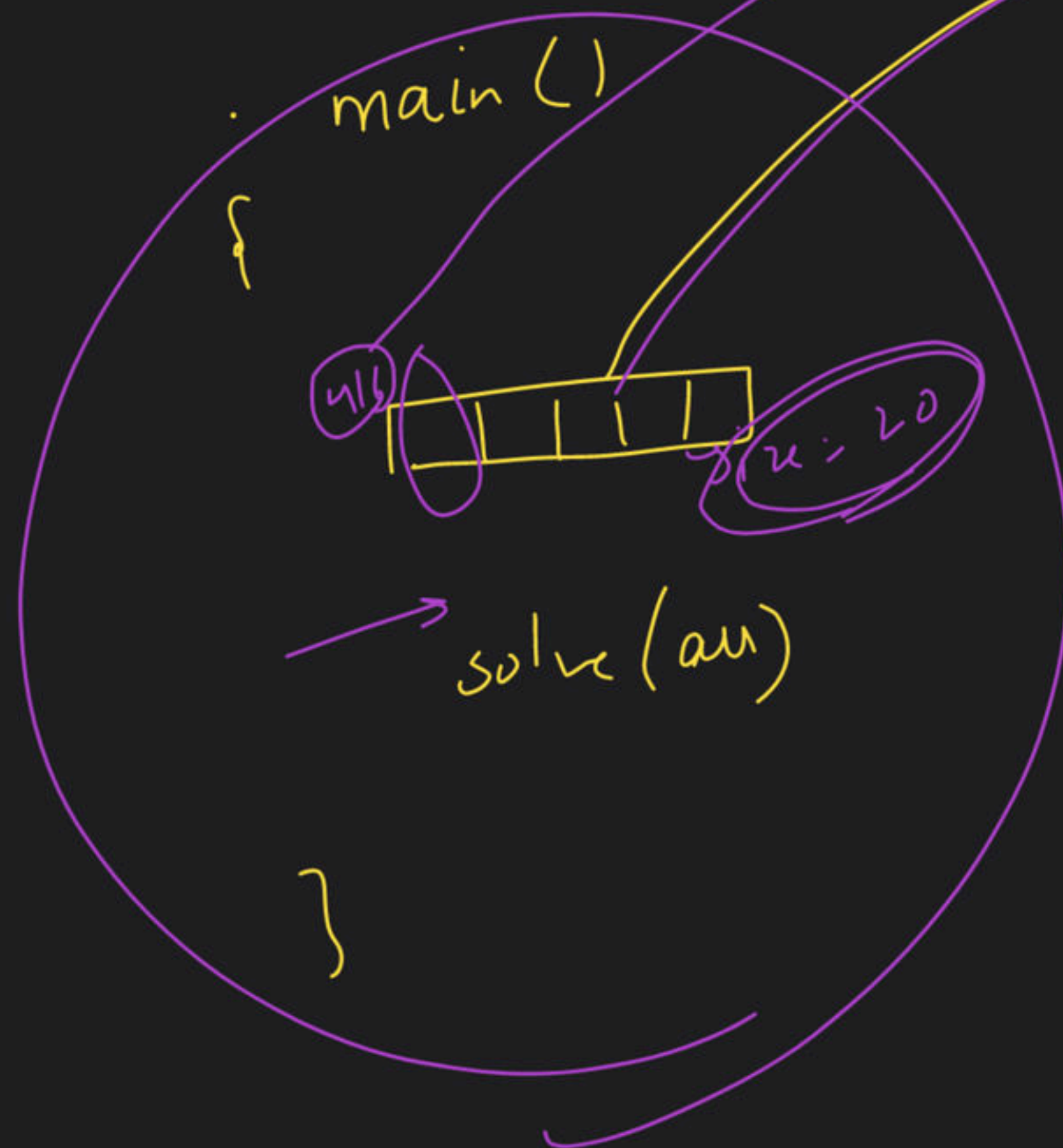
$\boxed{\text{arr}}$



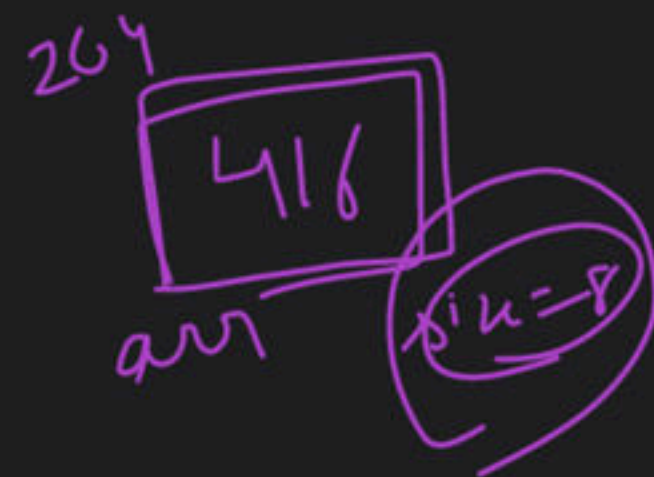
~~$\text{int} * \text{ptr} = \text{arr}$~~

$\text{int} (*\text{ptr})[5]$
 \uparrow
 $= \text{arr}$

→ Pointer → functions



~~solve (int arr[])~~
~~{~~
~~int arr[]~~ → int *arr



→ arr → 416
→ *arr → arr[0]

}

main ()

{

int arr[] = {1, 2, 3}

Solve (arr, 3)

Solve (int arr[], int siz.)

{

3

size

216

104

arr

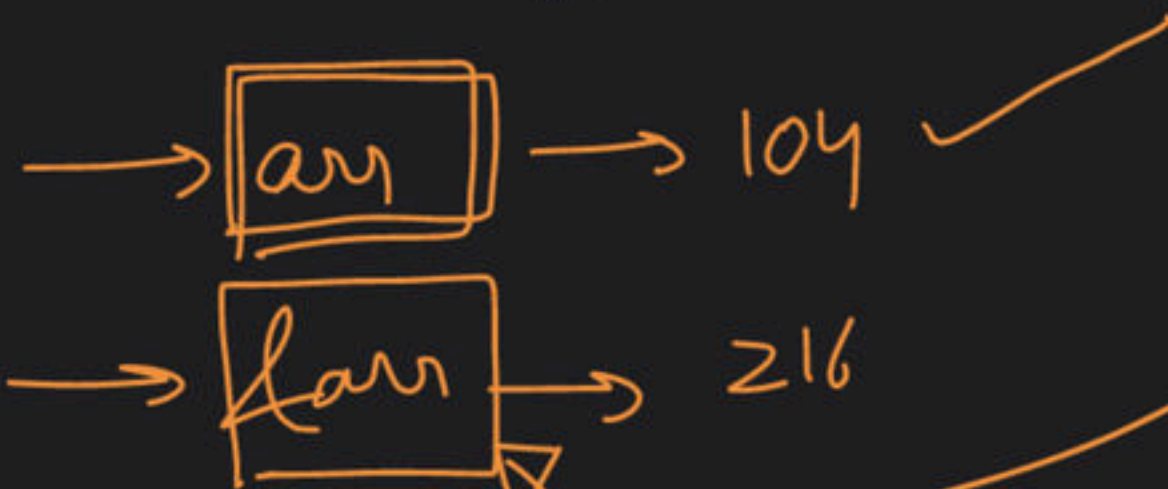
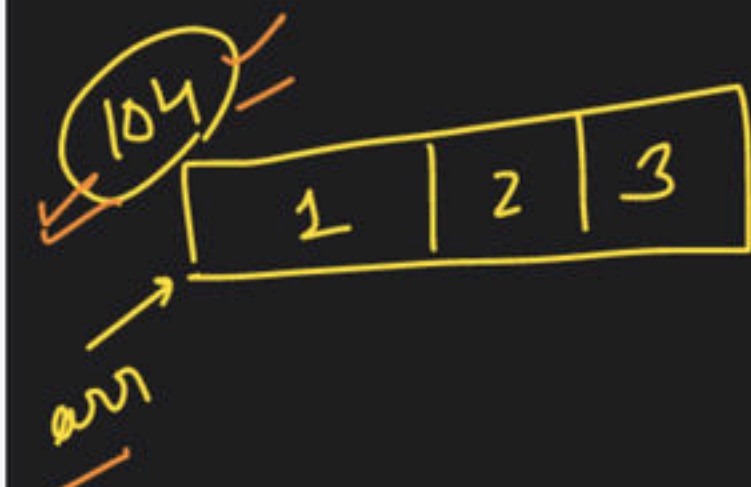
→ arr → 104 ✓

→ ~~arr~~ → 216

diff ✓

}

}



main ()



$arr[] = \{ 10, 20, 30 \}$

\downarrow
solu (arr)

// print array

11, 20, 30

solu (int arr[])

{
arr 216

$\star arr = \star arr + 1$
 $= 10 + 1$
 $= 11$
}

→ Pointer to Pointer

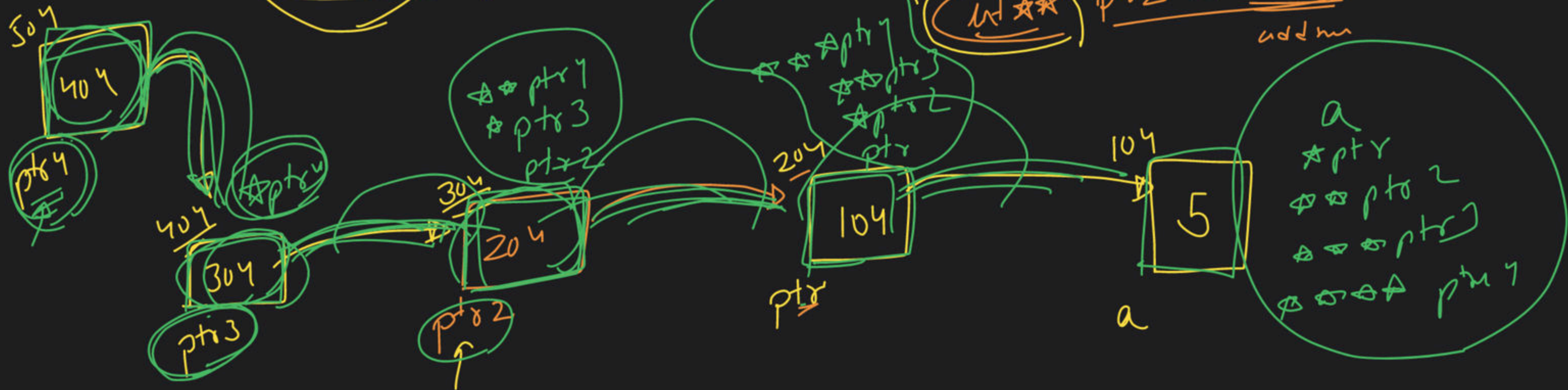
`int **** ptr4 = &ptr3`

`int *** ptr3 = &ptr2`

`int a = 5`

`int * ptr = &a`
address

`int ** ptr2 = &ptr`
address



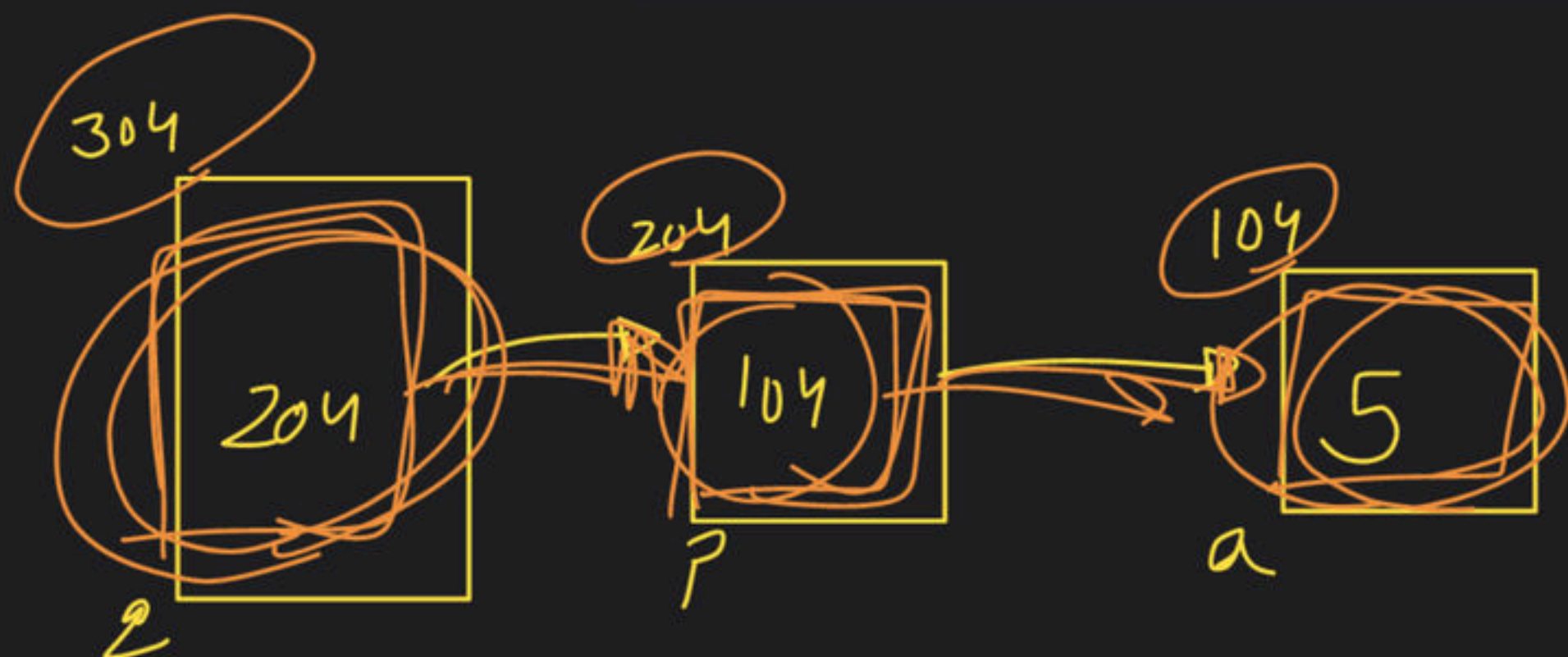
Qua;

2 min

```
int a = 5; ✓  
int *p = &a;  
int **q = &p
```

ptr ↓

→ a	→ 5
→ &a	→ 104
→ p	→ 104
→ &p	→ 204
→ *p	→ 5
→ q	→ 204
→ &q	→ 304
→ *q	→ 104
→ **q	→ 5



pendiy

main ()

{

int a = 5;
int *p = &a;

cout << p →
<< &p →
<< *p

104
204
5

solve (p)

p 1
*p 1

solve (int *p)

{

*p = *p + 5

}

##

int a = 10;

int *p = &a

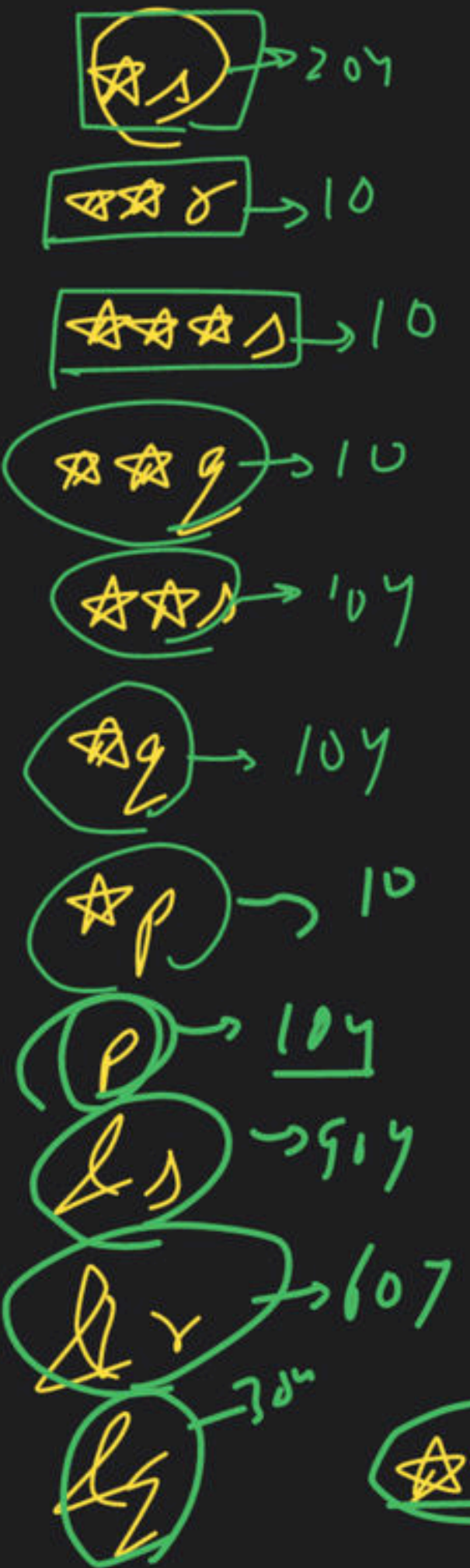
~~int **q = &p;~~

address
of int

*q

int **q = &p

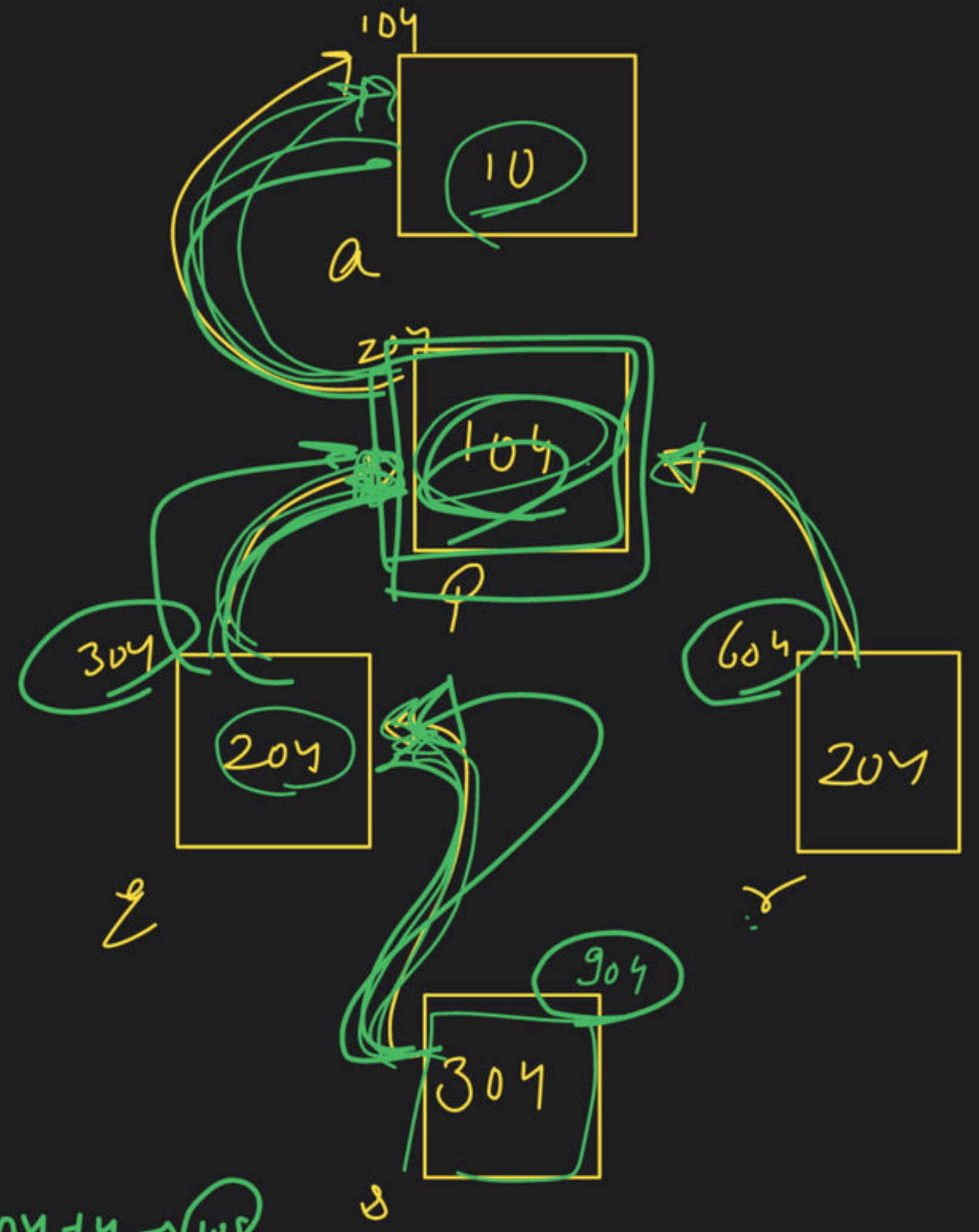
int *q = &a



```

int a = 10;
int *p = &a
int q = &p
int r = &p
int s = &q;

```



$\text{***s} + 1$
 $104 + 1 \rightarrow 108$

$\underline{104} + 1$
 $104 + 1 \times (4) \rightarrow 104 + 4 \rightarrow 108$

2 min

→ Sun → L.K → 9pm → doubt

→ Next Sat → 9 ~~7~~ ~~per~~ Session

→ Next Week → Mon → Recursion 17

main()

int a = 5;

int *p = &a;

→ p → 104
→ &p → 204
→ *p → 5

solve(p)

→ p → 107 → 104
→ &p → 207 → 204
→ *p → 1 → garbaj

Solu

~~int *p~~

int *p
ref

pass by value

~~p = *p + 1;~~
= 104

int *p

int *p

copy
baki
har.



3

