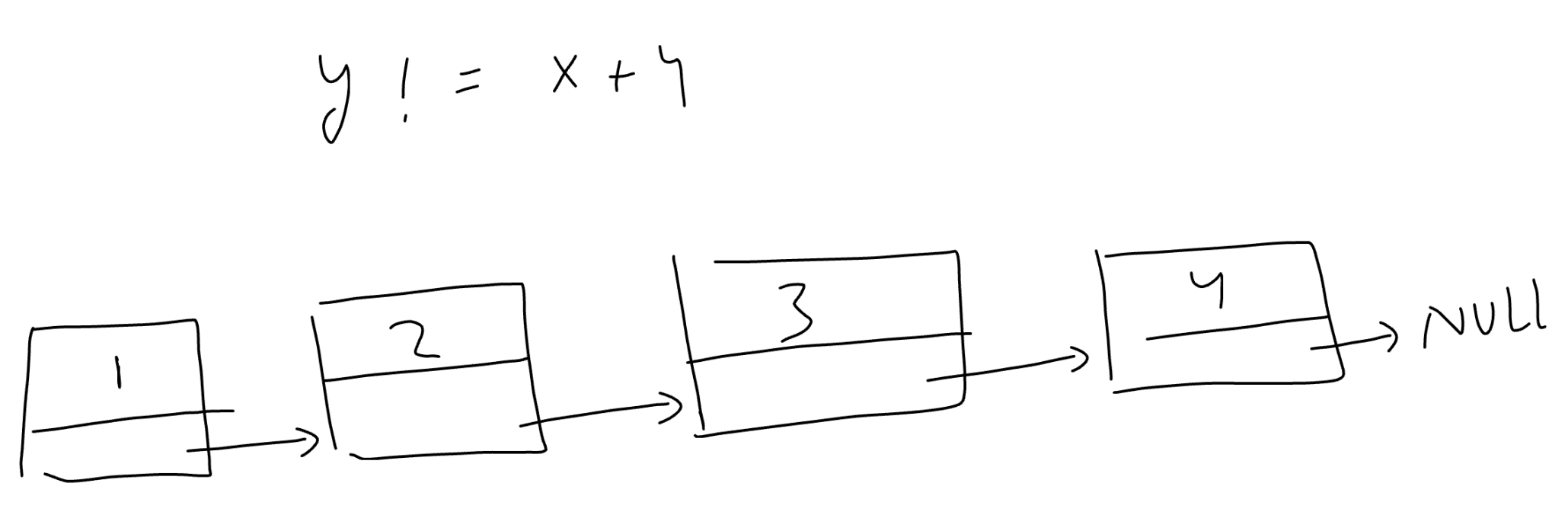
⇓
1 → 2 → 3 → 4
x y

y != x + 4

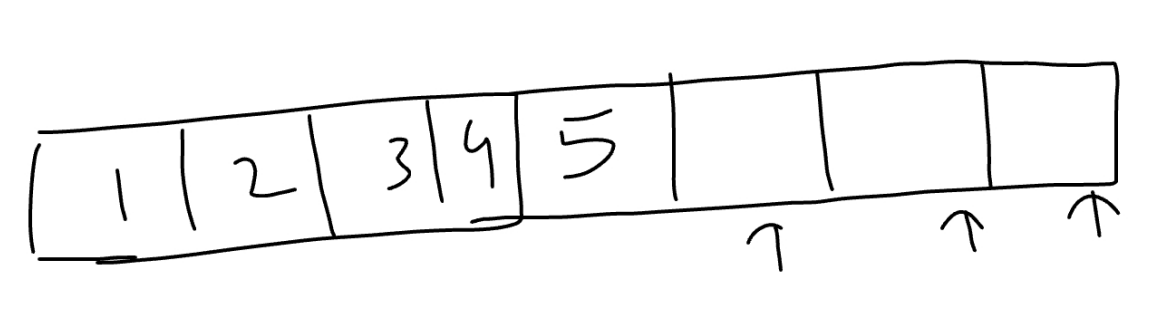


0 → 1 → 2

arr

1 → 2 → 2^2 → 2^3

head node.



↓
1, 2, 3, 4, 5

0

head
↓
0 → 1 → 2 → 3 → NULL

nn → next = head.
head = nn.

head
↳ 0 → 1 → 2 → 3 → NULL

4

head
↳ 0 → 1 → 2 → 3 → NULL
temp

temp → next = nn

0 → 1 → 2 → 3 → 4 → NULL

val = 6
pos = 4
head
↳ 0 → 1 → 2 → 3 → 4 → 5 → NULL
temp 5 6

0 → 1 → 2 → 3 → 6 → 4 → 5 → NULL

[nxt = temp → next
temp → next = nn
nn → next = nxt]

⇓
[nn → next = temp → next
temp → next = nn]

val : 6 pos = 6
0 → 1 → 2 → 3 → 4 → 5 → NULL
~~t~~ ~~t~~ ~~t~~ ~~t~~ ~~t~~ t
6

7 → 0 → 1 → 2 → 3 → 4 → 5 → NULL
↳ 8 ↳ 9 → 10

head tail
↓
4 1 → 2 → 3

tail → next = nn
tail = tail → next

head
↳
0 → 1 → 2 → 3 → NULL

toDel head
↳ 0 → 1 → 2 → 3 → NULL

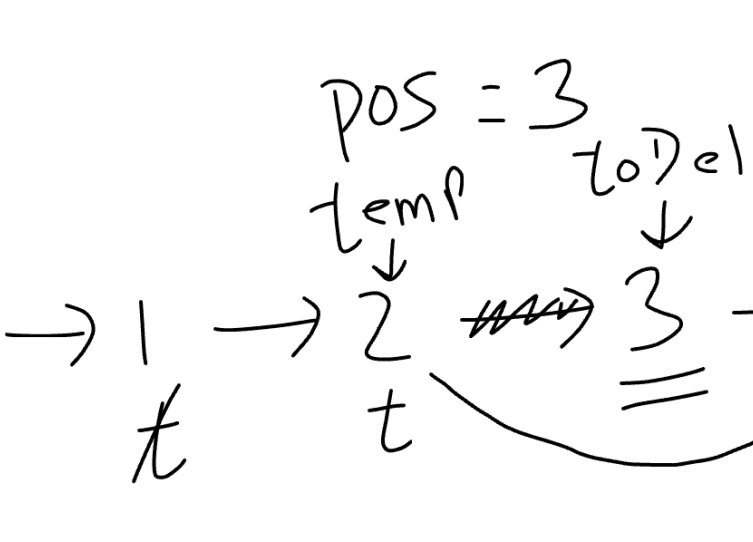
toDelete = head
head = head → next
delete (toDelete)

[NULL → data
NULL → next] → Runtime error.

temp tD
0 → 1 → 2 → 3 → 4 → NULL

0 → 1 → 2 → 3 → NULL

toDelete = temp → next
temp → next = NULL
delete (toDelete)



head tail
↳ 1 → 2 → 3 → 4 → N

pos : 3
temp toDel ~~t~~ t
0 → 1 → 2 → 3 → 4 → 5 → NULL
~~t~~ ~~t~~ t

pos −1
jumps.

0 → 1 → 2 → 4 → 5 → NULL

toDelete = temp → next
temp → next = temp → next → next
delete (toDelete)

head
↓
1 → 2 → 3 → 4 → 5 → NULL

head
↓
5 → 4 → 3 → 2 → 1 → NULL

curr temp
prev ~~temp~~ ~~t2~~
NULL ← 1 ← 2 ← 3 ← 4 → 5 → NULL

[~~temp = curr → next~~
~~→ next = prev~~]
[prev =
=]

1 → 2 → 3 → 4 → 5 → 6 → 7 → NULL

prev curr temp
NUL ← 1 ← 2 ← 3 ← 4 → 5 → 6 → 7 → NULL
c

temp = curr → next
curr → next = prev
[prev = curr
curr = temp]

prev = NULL
curr t
1 → 2 → 3 → 4 → 5 → 6 → 7 → NULL
~~p~~ ~~t~~ ~~t~~ ~~t~~ ~~t~~ t
~~c~~ ~~c~~ ~~c~~ c
~~p~~ ~~p~~ ~~p~~ p

mid
↓
1 → 2 → 3 → 4 → 5 → NULL

mid
↓
1 → 2 → 3 → 4 → 5 → 6 → NULL

~~t~~ ~~t~~ ~~t~~ t
1 → 2 → 3 → NULL

n = ~~0~~ ~~1~~ ~~2~~ 3

odd → $\frac{n}{2}$ hops

even → $\frac{n}{2} - 1$ hops

~~s~~ ~~s~~ ~~s~~ s
1 → 2 → 3 → 4 → 5 → 6 → 7 → NULL
~~f~~ ~~f~~ ~~f~~ f

s = s → next
f = f → next → next

Keep running till f → next != NULL
↳ when size is odd.

~~s~~ ~~s~~ s
1 → 2 → 3 → 4 → 5 → NULL
~~f~~ ~~f~~ f

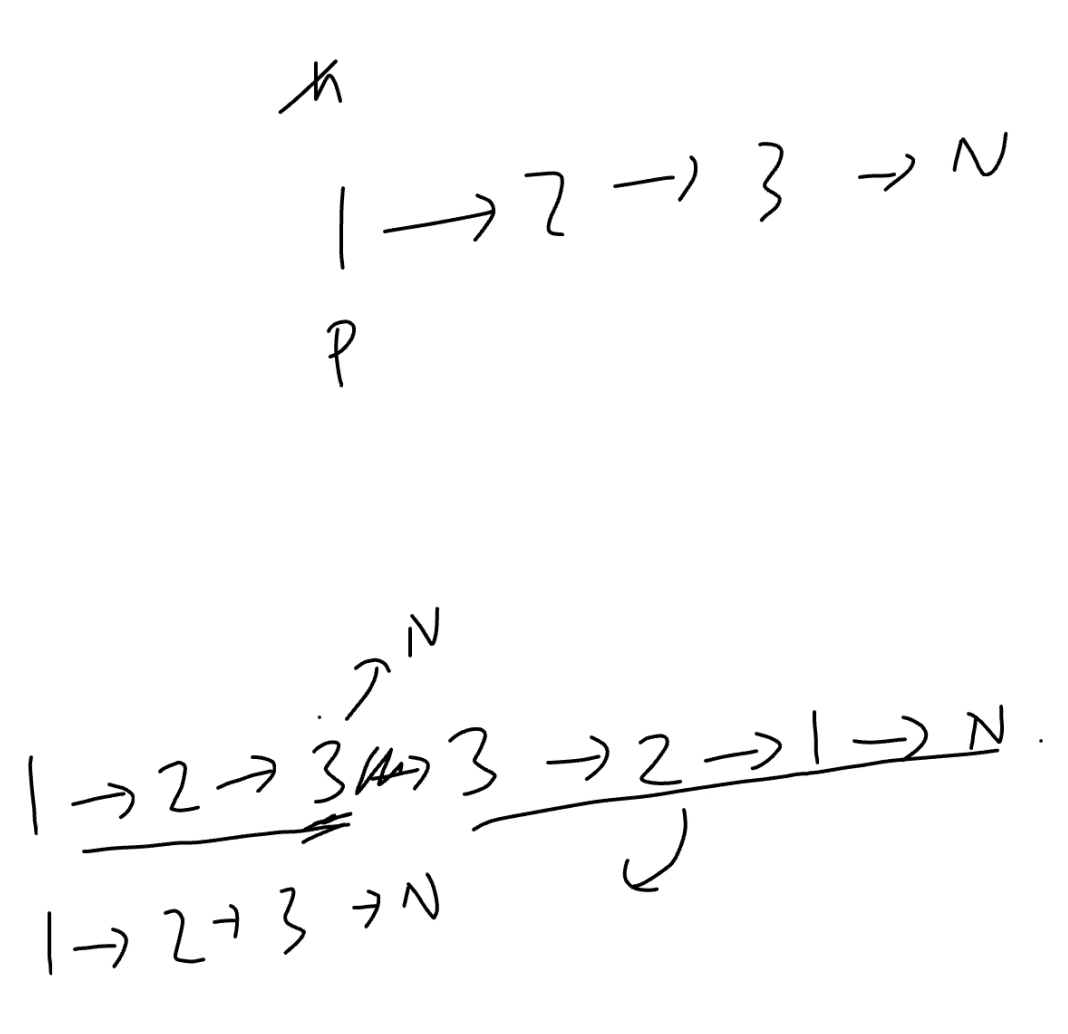
~~s~~ ~~s~~ s
1 → 2 → 3 → 4 → 5 → 6 → NULL
~~f~~ ~~f~~ f

Keep running till f → next → next != NULL
↳ when size is even.

f → next != NULL AND f → next → next != NULL

~~s~~ ~~s~~ ~~s~~ s
1 → 2 → 3 → 4 → 5 → 6 → NULL
~~f~~ ~~f~~ ~~f~~ f

~~i~~ i i ↓
1a → 2a → 3 → 2b → 1b → N



1b head
2b head → next
3
2a
1a

~~n~~
1 → 2 → 3 → N
p

p = head

N
1 → 2 → 3 → 3 → 2 → 1 → N.
1 → 2 → 3 → N

N
1 → 2 → 3 → 2 → 1 → N.
1 → 2 → N.