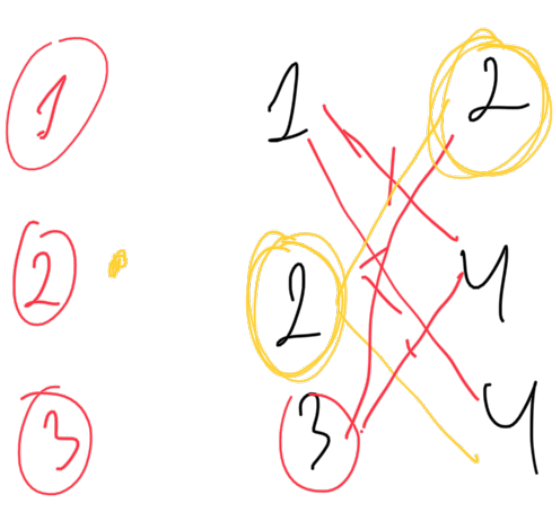

HIEllO



1

```
int cnt = 0;
for (i → n)
    for (j → n)
        if (h[i] == a[j] && i != j)
            cnt++;
```

ans = 13

Bạn	1	2	3	4
giá	3	2.3	3.3	4.3

3 + 6 + 9 + 12 = 30 - 17

⇒ 13

```
int sum = 0;
for (i = 1 → w)
    sum = sum + i.k
```

ans = sum − n

cách 2:

- $sum = 1.k + 2.k + 3.k + 4.k + \ldots + w.k$

$= k(1+2+3+4+\ldots+w)$

$$Sum = \frac{k.(1+w).w}{2}$$

w k n

1 = 1.k
2 = 2.k
3 = 3.k
⋮

cách 1:

int sum = 0; tăng dần đến mua w quyển

for (i = 1 → w)
- sum = sum + i.k O(n)

(i: số thứ tự quyển)

ans = sum − n j

Cách 2: toán vip pro

sum = 1.k + 2k + 3k + ... + w.k

$= k(1+2+3+\ldots+w)$

$$Sum = \frac{k \cdot (w+1) \cdot w}{2} \quad O(1)$$

$Sum > n$

$Sum < n$

$Sum - n < 0$ $\quad ans = 0$

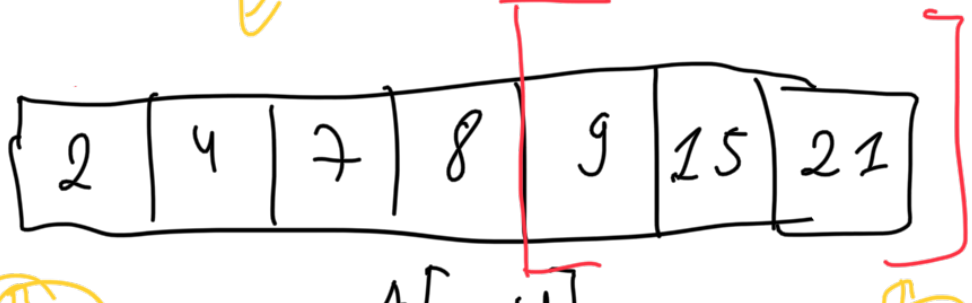
$ans = \max(\underbrace{Sum - n}_{<0}, 0)$

A

Đề tìm x trong mảng A $\quad x = 9$

Binary search $\quad x = 2$

$l = 0, \; r = 6$



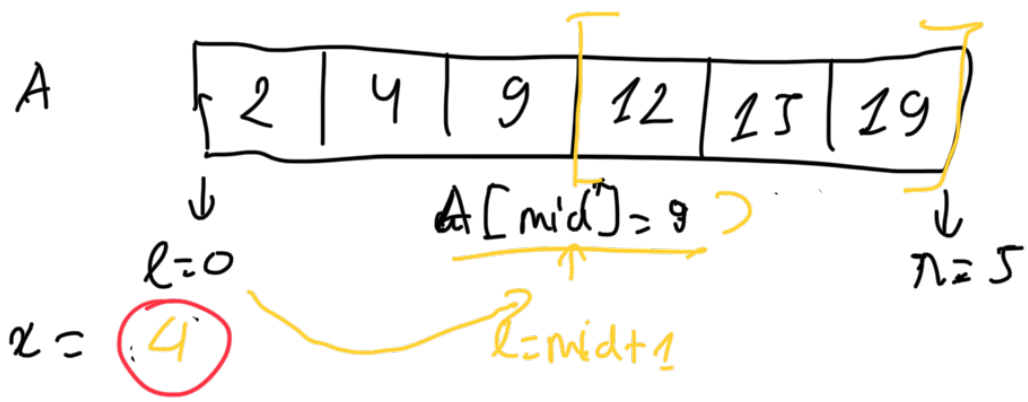
$\ell = 0$ $\quad$ $8 \neq 9$ $\quad$ $r = 6$

$mid = (\ell + r)/2$

$A[mid] = 8 < 9$

```
while (ℓ ≤ r)
{
   If (A[mid] == x) return mid;
    If (A[mid] < x) ℓ = mid+1
     else r = mid-1;
}
return -1;   x ∉ A
```

Binary search




```
int mid = (ℓ+r)/2
```

```
int ℓ=0; r=n-1;
while (ℓ ≤ r)
{
    int mid = (ℓ+r)/2;
    If(A[mid]==x) return mid;
```

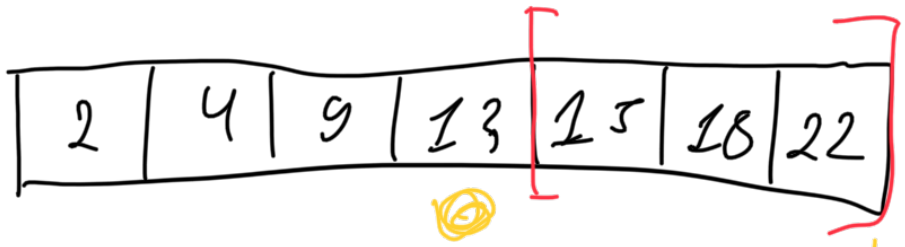
If (A[mid] < x) l = mid+1;

else r = mid-1

}

return -1;

x = 4



int search()

{

while (l <= r)

{

int mid = (l+r)/2;

If (A[mid] == x) return mid;

If (A[mid] < x) l = mid+1;

else r = mid-1

}

return -1; x