$[x]$:= x 이하의 가장 큰 정수.

l, r, m.

같아야.

```
while(l<=r) {
    m = (l+r) >> 1;
```

$[-\frac{1}{2}] = -1$.

$2^6\ 2^5\ 2^4\ 2^3\ 2^2\ 2^1\ 2^0$

... 0 1 0 1 0 0 0.

>> 1.

↳ 0 1 0 1 0 0 X.

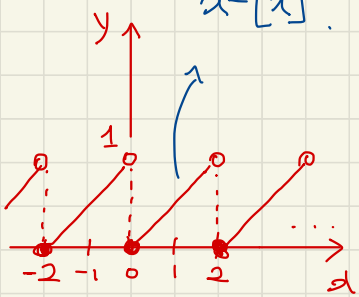
$-\frac{1}{2} = -0.5$

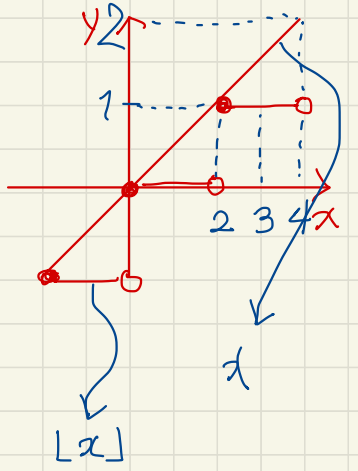
$-1/2 = 0$

⇕

$-(1/2)$

$x-[x]$.





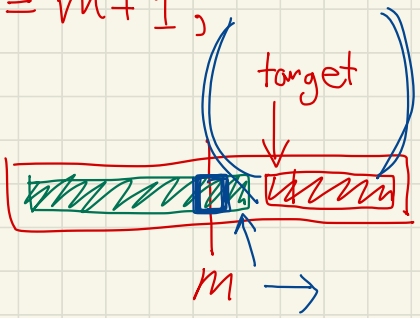
시간복잡도 ≥ 공간복잡도.

- 사용한 배열크기
- 사용한 함수호출

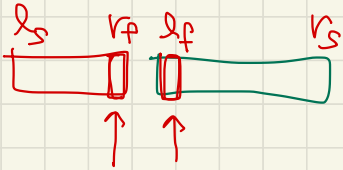
⇓

구하기 쉬움.

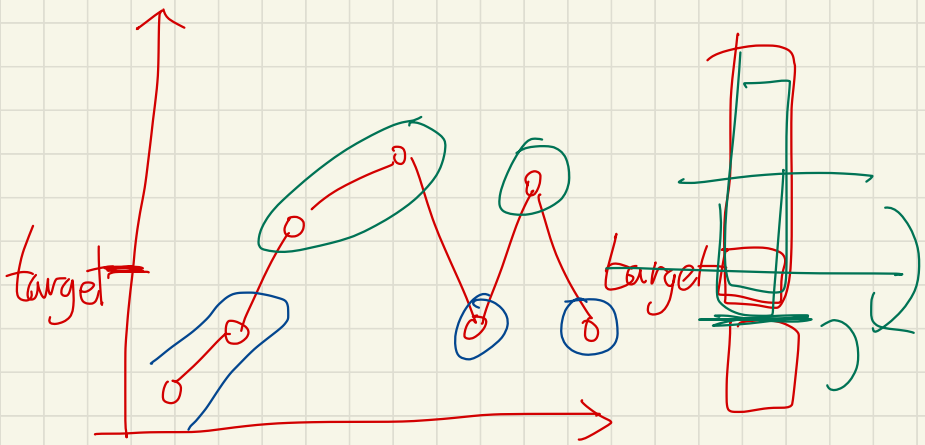
```
while ( l <= r ) {
    m = (l+r) >> 1;
    if ( m에 대한 조건 )  l = m+1;
    else                  r = m-1;
}
```



조건(m) := b[m] < target.



<=	>=
↕	↕
>	<



10^{1000} : 10진법으로 1001자리수.

$\log_{10}(10^{1000})+1$.

10^{10}: 10진법으로 11자리수.

$= 1000+1$.

10^3: 10진법으로 4자리수.

$\log_2(10^{1000})+1 = 1000\cdot\underbrace{\log_2 10}_{<4.} + 1$.

2.5

< 4000.

2 5000

$= \underline{2.5e4}$

$\underline{1e9} = 10^9$.