

① Key = 99

[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
11	22	33	44	55	66	77	88	99

left

mid.

Right

② $L = 0$
 $R = 8$
 $M = 4$

③ $99 == 55$? Comp = 1

④ $99 > 55 \rightarrow$ consider RSA.

RSA.

[5]	[6]	[7]	[8]
66	77	88	99

$L = m + 1 = 5$
 $R = 8$
 $M = 6$

left mid. Right

③ $99 == 77$? Comp = 2

④ $99 > 77 \rightarrow$ RSA.

RSA.

[7]	[8]
88	99

$L = \text{mid} + 1 = 7$
 $R = 8$

$M = (7 + 8) / 2 = 7$
left Right
mid.

[5]
66

Comp = 3

③ $99 == 88$? no.

④ $99 > 88 \rightarrow$ RSA.

RSA \rightarrow mid + 1 to Right

[8]
99

$L = \text{mid} + 1 = 8$
 $R = 8$
 $M =$

Right
left
mid.

Comp = 4

③ $99 == \text{arr}[\text{mid}]$

$99 == 99 \rightarrow$ Yes
key found at index 8.