⇒ Search for a value or element in Sorted array

Ex: | 8 | 7 | 20 | 27 | 13 | 18 | 9 | 10 |

① Target is: 13

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 7 | 20 | 27 | 13 | 18 | 9 | 10 |

left   mid   end

important:
- Sort the array
- Define left, right
- find mid = $\dfrac{left + right}{2}$

return as int

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 7 | 20 | 27 | 13 | 18 | 9 | 10 |

                left   mid   end

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 7 | 20 | 27 | 13 | 18 | 9 | 10 |

                    target

① if all [mid] < value:

=) Search to the right f mid

=) start = mid + 1, ends end

② if all [mid] > value:

=) Search to the left f mid

=) start = start , ends mid + 1

③ if all [mid] = element

returned mid