sliding window

→ left.   ← right

$[1, 2, 3, \boxed{4, 5, 6,} 7, 8, 9, 10, 11, 12]$.

i   i+k-1

- pre calculate left and right which is
  the index with max sum within $[0, i]$ $[i, n-1]$

- move sliding window within range.

  - for each sliding window,
    sum can be calculated with $O(1)$

```
const sum = sums[left[i-1]] + sums[i]
                + sums[right[i+k]];
```

max = Math.max(max, sum);

$$\text{sums}[i] = \text{sums}[i-1] + \text{nums}[i+k-1]$$
$$- \text{nums}[i-1]$$

$$\text{left}[i] = \text{sums}[i-k+1] > \text{sums}[\text{left}[i-1]]$$
$$? \ i-k+1$$
$$: \ \text{left}[i-1]$$

$$\text{right}[i] = \text{sums}[i] > \text{sums}[\text{right}[i+1]]$$
$$? \ i$$
$$: \ \text{right}[i+1]$$