* Common Query Optimization

Eg. 307

* Sqrt decomposition: O(sqrt(n))
* Segmentation tree

1. Build segmentation tree

Time: O(n) (2\*n nodes in the segmentation tree)

Space: utilize array, node index = i, left child indedx = 2\*i, right child index = 2\*i+1. (2\*n extra space required)

1. Update: bottom-up

Time: O(logn)

Space: O(1)

1. Query

Time: O(logn)

Space: O(1)

* String matching (with regular expression)

Eg. 10

* Recursive

复杂度计算是比较复杂的 =，=

* DP O(TP) \*T = len(text) P = len(pattern)