Robinson-Schensted-Knuth algorithm

Start with two empty tableaux. Read letters of the word one after another. With each letter proceed as follows:

1. start with the bottom row of the *insertion tableau P,*
2. insert the letter to the leftmost box in this row which contains a number which is **bigger** than the one which you want to insert,
3. if you had to bump some letter, this bumped letter must be inserted in to the next row according to the rule number 2,
4. if you inserted a letter to an empty box in the *insertion tableau P,* make a mark about the position of this box in the *recording tableau Q* and proceed to the next letter of the word.

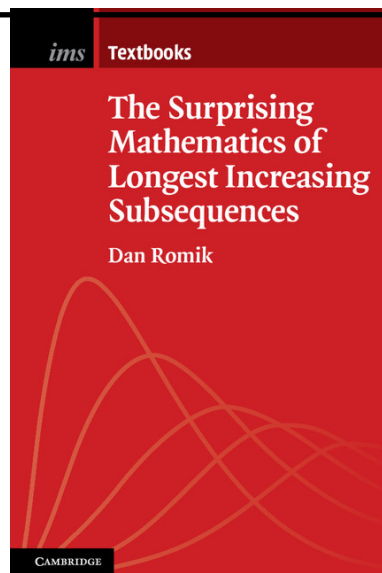| 74	99		
23	53	70	
16	37	41	82

insertion tableau $P(w)$

8	9		
4	6	7	
1	2	3	5

recording tableau $Q(\mathbf{w})$

$$\mathbf{w} = (23,\ 53,\ 74,\ 16,\ 99,\ 70,\ 82,\ 37,\ 41,\ 18)$$

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