

Algorithm:	Complexity:
LIS	<p><i>-Size:</i> (binary search): $O(n * \log n)$</p> <p><i>-Dynamic programming:</i> $O(n * (n + \log(n))) =$ $= O(n^2 + n * \log(n)) \Rightarrow O(n^2)$</p> <p><i>-By LCS:</i> $O(n^2) + O(n * \log n)$</p>
Strategy game	$O((n^2)/2) \Rightarrow O(n^2)$
MinMax (couple)	$O(n)$
LCS	$O(m * n) + O(m + n) = O(m * n)$
Compiler	$O(n) + O(n \log(n)) = O(n * \log n)$
Power	<p><i>Recursive + Iterative:</i> $O(n)$</p> <p>Improve algorithms: $O(\log n)$</p>
Fibonacci	<p>Recursive: $O(2^n)$</p> <p>Iterative: $O(n)$</p> <p>Improve: $O(\log n)$</p>
Max in array	$O(n)$

2 max in array	$O(\frac{3}{2}n) \Rightarrow O(n)$
Airplane	<i>-Dynamic programming: $O(m * n)$</i>
Pizza	$O(1)$
Glass balls	1 ball: $O(n)$ Dividing equal parts: $O(2 * \sqrt{n})$ Dividing unequal parts: $O(\sqrt{2} * \sqrt{n})$ K balls: $O(K * n^2)$
Array matrix	$O(n^2)$
Median	$O(1)$
Donuts	$O(1)$