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| algo | **complexity** |
| LIS | ***-Size***: (binary search)- **O(nlog(n))**.  ***-dynamic programming***:  O(n\*(n + log(n))) =  = O(n^2 + nlog(n)) => **O(n^2)**.  ***-By LCS***: **O(n^2) + O(nlog(n))**. |
| Strategy game | O((n^2)/2) => **O(n^2)**. |
| MinMax(couple) | **O(n).** |
| LCS | O(m\*n) + O(m+n) **= O(m\*n)**. |
| Compiler | O(n)+O(nlog(n)) = **O(nlog(n)).** |
| Power | *Recursive + Iterative****:* O(n)**  Improve algorithms: **O(log(n))**. |
| Fibonacci | -recursive: **O(2^n)**  - iterative: **O(n)**  -Improve: **O(log(n))**. |
| Max in array | **-O(n)** |
| 2 max in array | -O(1.5n) -> **O(n)** |
| Airplane | *-dynamic programming*: **O(m\*n)** |
| Pizza | **O(1)** |
| Egg dropping | 1 ball – **O(n)**  dividing to equal parts: **O(2 sqrt(n))**  dividing to different parts**: O(sqrt(2\*n))** |
| Array matrix | **O(n^2)** |
| Median | **O(1)** |
| Donuts problem | **O(1)** |