maximum n	complexity	algorithms	data structures
1,000,000,000 and higher	log n, sqrt n	binary search, ternary search, fast exponentiation, euclid algorithm	
10,000,000	n, n log log n, n log* n	set intersection, Eratosthenes sieve, radix sort, KMP, topological sort, Euler tour, strongly connected components, 2sat	disjoint sets, tries, hash_map, rolling hash deque
1,000,000	n log n	sorting, divide and conquer, sweep line, Kruskal, Dijkstra	segment trees, range trees, heaps, treaps, binary indexed trees, suffix arrays
100,000	n log^2 n	divide and conquer	2d range trees
50,000	n$^{1.585}$, n sqrt n	Karatsuba, square root trick	two level tree
1000 - 10,000	n^2	largest empty rectangle, Dijkstra, Prim (on dense graphs)	
300-500	n^3	all pairs shortest paths, largest sum submatrix, naive matrix multiplication, matrix chain multiplication, gaussian elimination, network flow	
30-50	n^4, n^5, n^6		

25 - 40	$3^{n/2}$, $2^{n/2}$	meet in the middle	hash tables (for set intersection)
15 - 24	2^n	subset enumeration, brute force, dynamic programming with exponential states	
15 - 20	n^2 2^n	dynamic programming with exponential states	bitsets, hash_map
13-17	3^n	dynamic programming with exponential states	hash_map (to store the states)
11	$n!$	brute force, backtracking, next_permutation	
8	n^n	brute force, cartesian product	