

prog1 n	runtime	lg(n)	lg(O(n))	Estimate runtime
50	2	5.64385618977472	1	$O(n^{2.5})$
100	4	6.64385618977473	2	
200	16	7.64385618977472	4	
400	86	8.64385618977473	6.4262647547021	
800	460	9.64385618977473	8.84549005094438	
1600	2823	10.6438561897747	11.4630134134497	
3200	19247	11.6438561897747	14.2323459722447	
6400	468191	12.6438561897747	18.8367376763362	

prog2 n	runtime	lg(n)	lg(O(n))	Estimate runtime
50	2	5.64385618977472	1	$O(n^{0.84})$
100	3	6.64385618977473	1.58496250072116	
200	4	7.64385618977472	2	
400	6	8.64385618977473	2.58496250072116	
800	11	9.64385618977473	3.4594316186373	
1600	20	10.6438561897747	4.32192809488736	
3200	41	11.6438561897747	5.35755200461808	
6400	153	12.6438561897747	7.25738784269265	

prog3 n	runtime	lg(n)	lg(O(n))	Estimate runtime
16	2	4	1	$O(n^{5.35})$
20	4	4.32192809488736	2	
24	58	4.58496250072116	5.85798099512757	
28	901	4.8073549220576	9.81538329581354	
32	14335	5	13.8072542841279	
34	57247	5.08746284125034	15.804912471038	
36	229093	5.16992500144231	17.8055738518067	
38	917270	5.24792751344359	19.8069869305323	

