

**HW/Assignment 01: Fun with Algorithm Analysis**

Input Size	Prog1	Prog2	Prog3	Prog4	Prog5
100	0:00.19	0:00.23	0:01.07		0:01.68
1,000	0:00.33	0:00.31	0:01.19		0:01.73
10,000	0:02.05	0:07.64	0:01.14		0:01.89
100,000	0:09.16		0:01.21		0:01.85
1,000,000	1:17.81		0:01.45		0:01.67

Prog1 appears to have the asymptotic behavior of  $O(n)$ .

Prog2 appears to have the asymptotic behavior of  $O(n^2)$

Prog3 appears to have the asymptotic behavior of  $O(\log(n))$

Prog4 appears to have the asymptotic behavior of  $O(2^n)$

Prog5 appears to have the asymptotic behavior of  $O(1)$