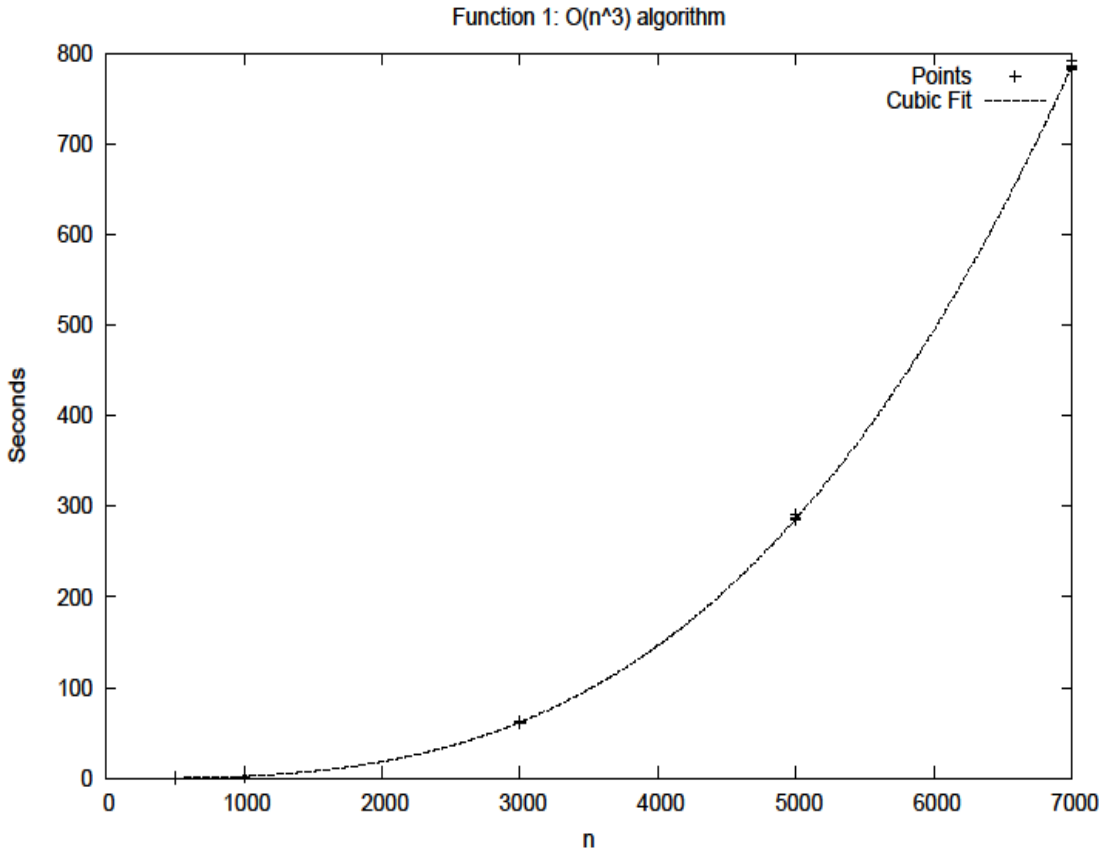
Complexity Project: Summary

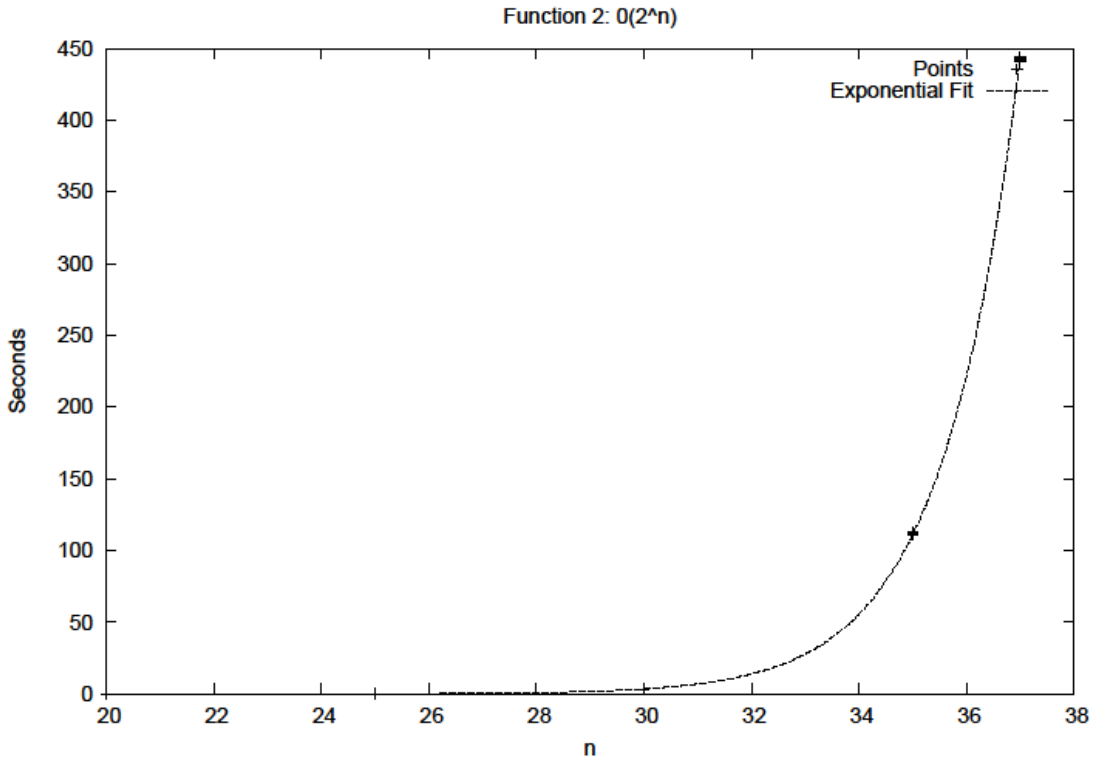
Function 1:



C = 2.29066e^-9 Asymptotic Standard Error: 0.09755%

The low Error supports the hypothesis that this algorithm is O(n^3).

Function 2:

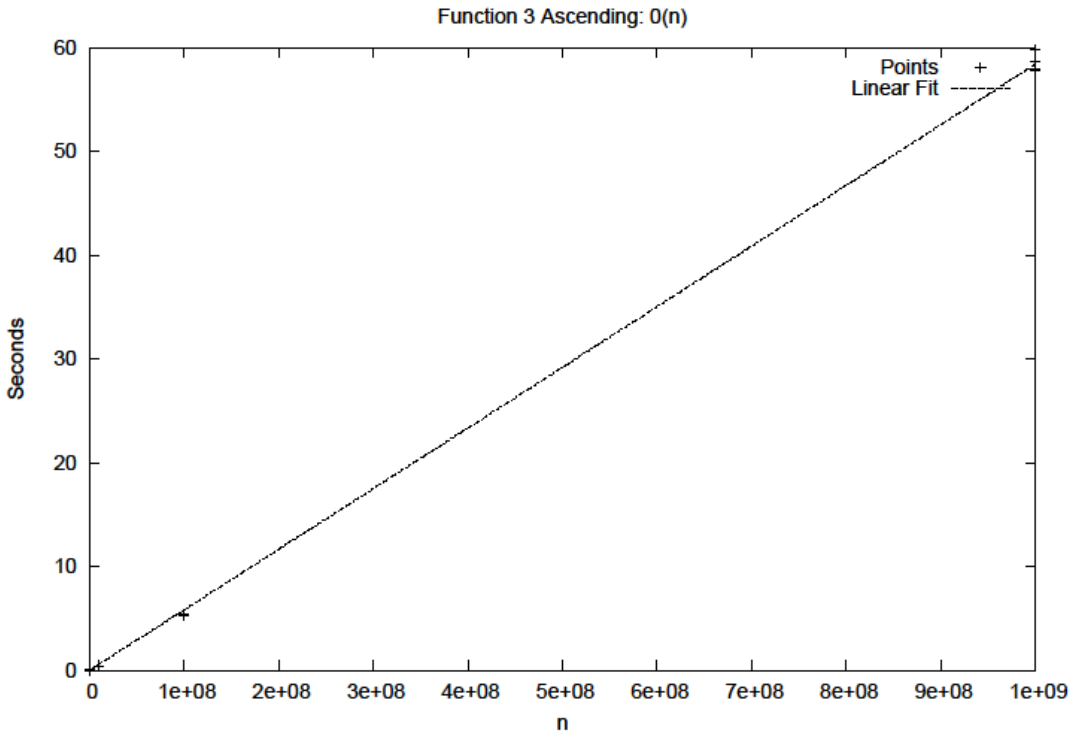


C = 3.22365e^-9 Asymptotic Standard Error: 0.067%

The low Error supports the hypothesis that this algorithm is O(2^n).

Function 3:

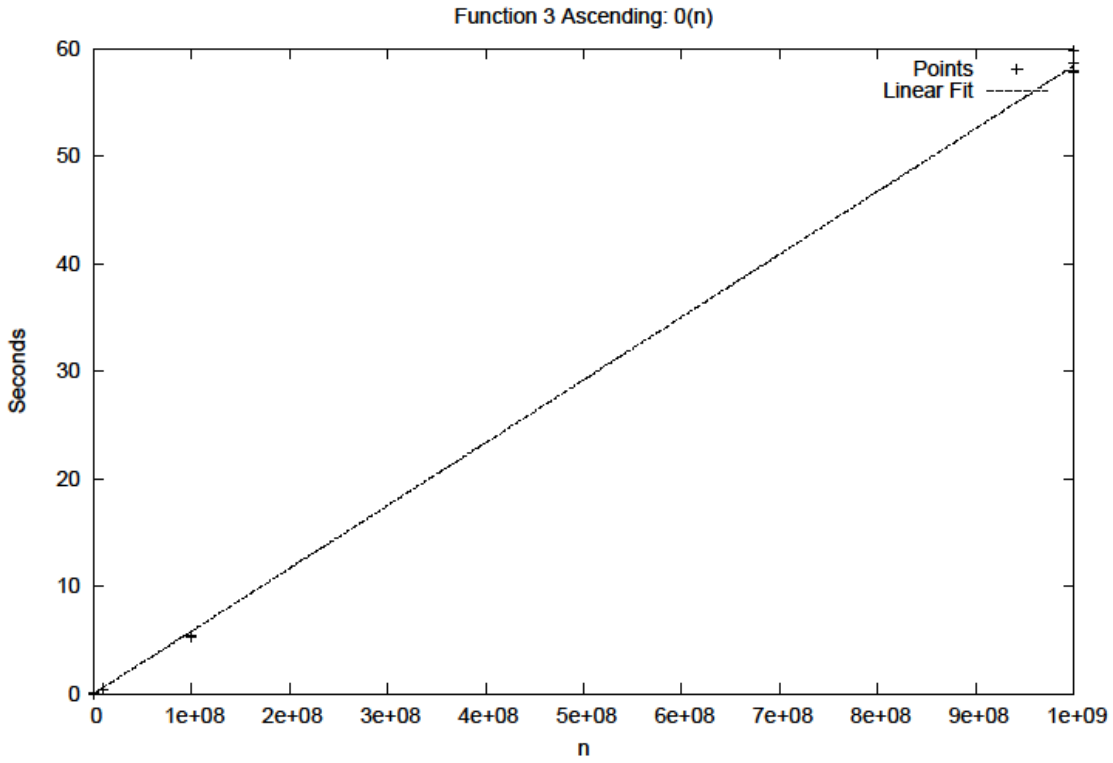
Ascending:



C = 5.83911e^-8 Asymptotic Standard Error: 0.09775%

The low Error supports the hypothesis that this algorithm is O(n).

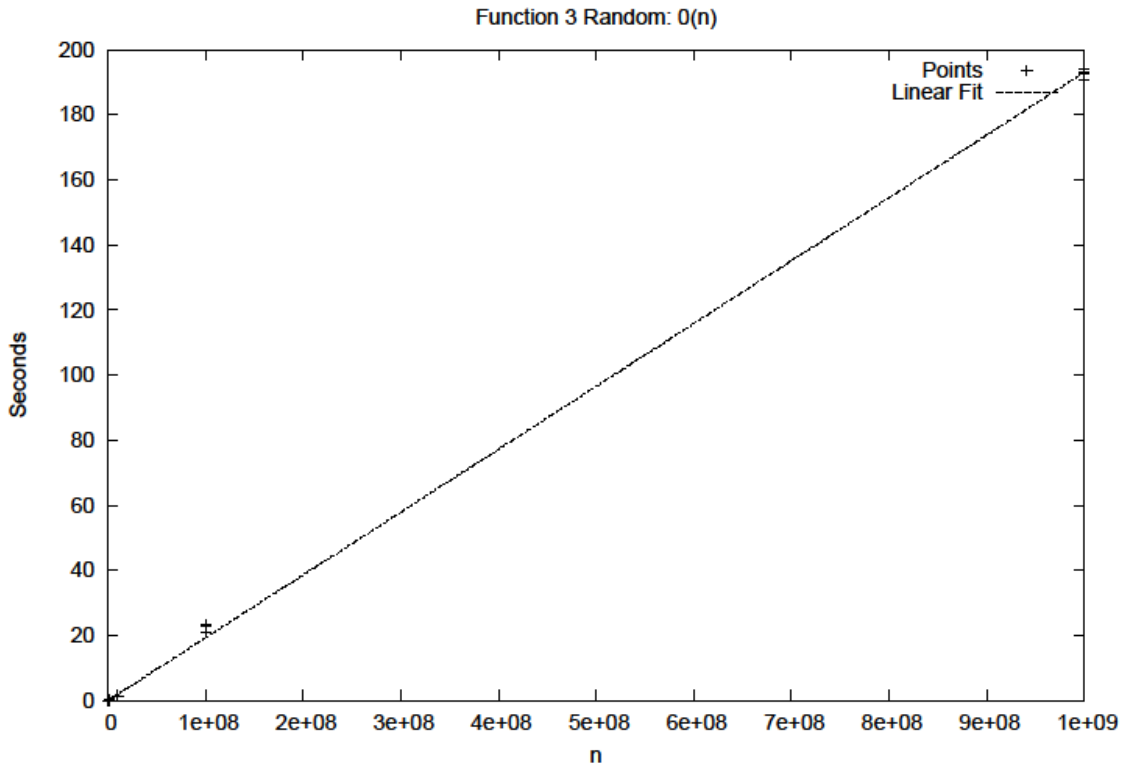
Descending:



C = 5.85704e^-8 Asymptotic Standard Error: 0.3295%

The low Error supports the hypothesis that this algorithm is O(n).

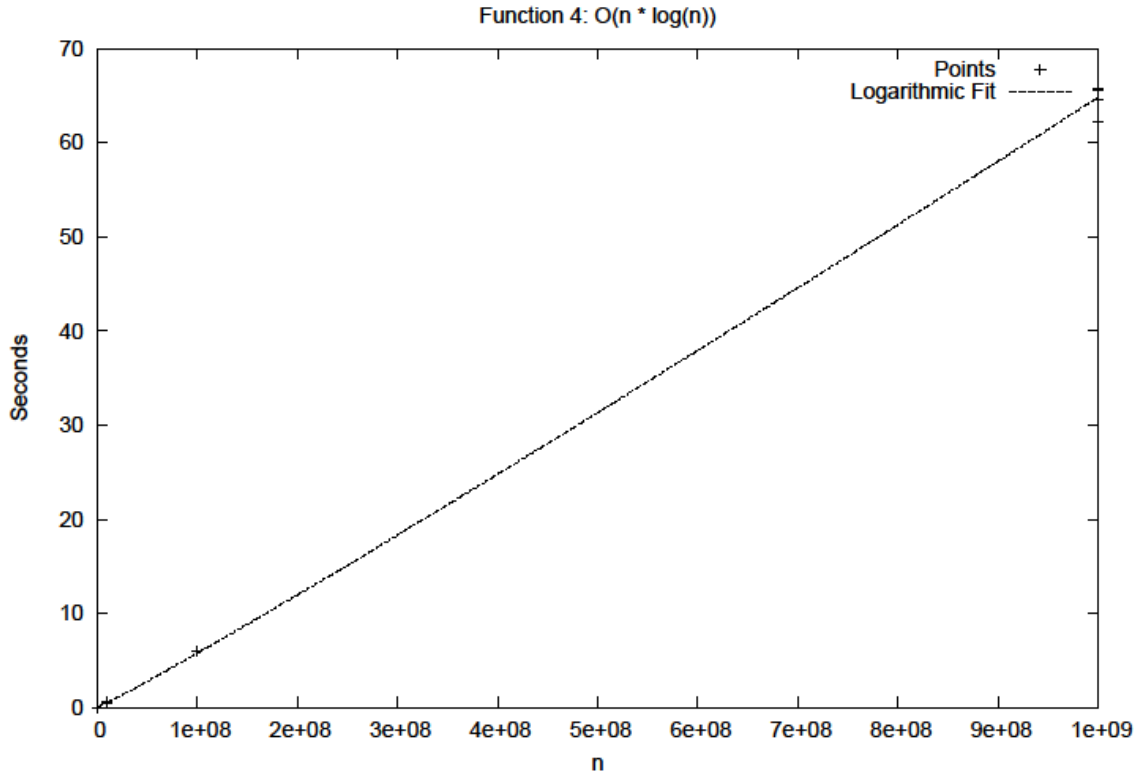
Random:



C = 1.93034e^-7 Asymptotic Standard Error: 0.3844%

The low Error supports the hypothesis that this algorithm is O(n).

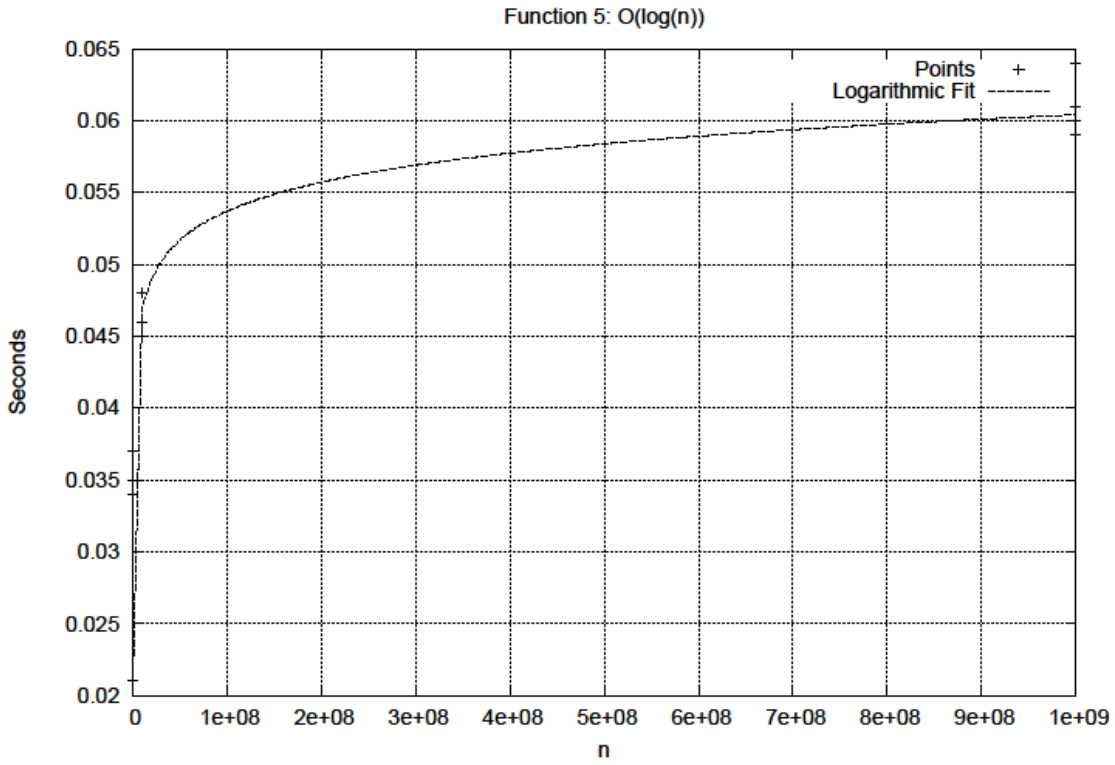
Function 4:



C = 3.12733e^-9 Asymptotic Standard Error: 0.4168%

The low Error supports the hypothesis that this algorithm is O(nlog(n)).

Function 5:

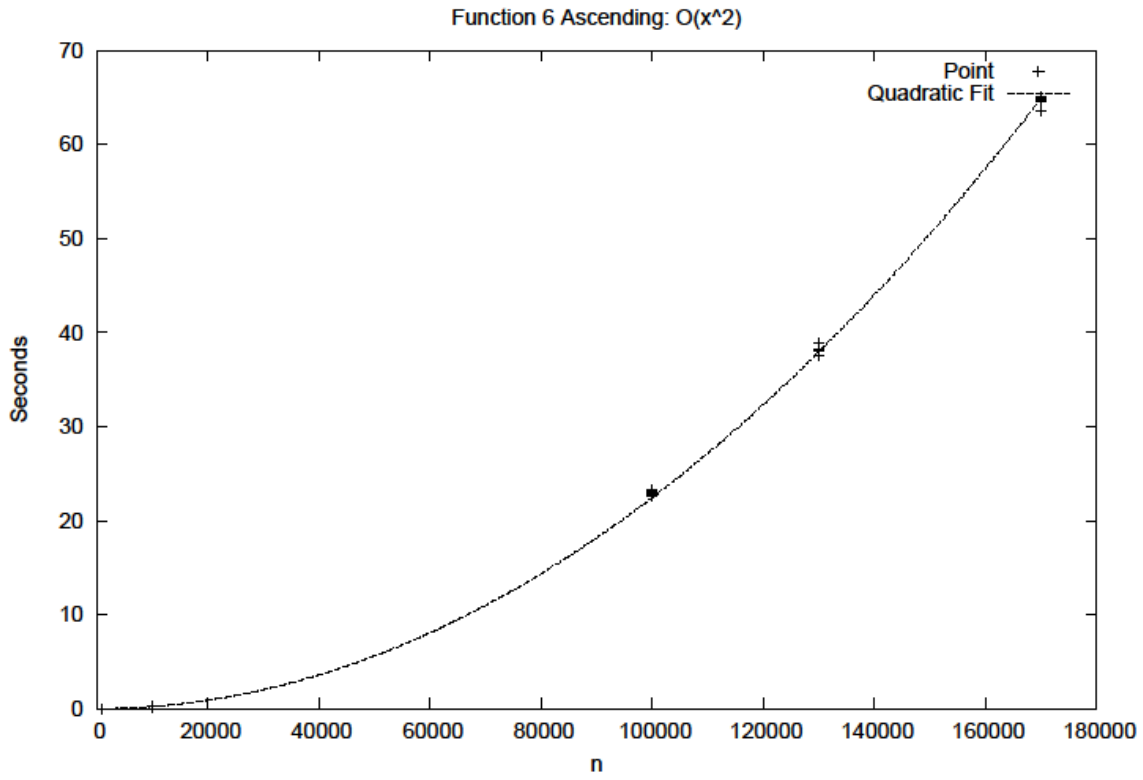


C = 0.00291504 Asymptotic Standard Error: 0.6926%

The low Error supports the hypothesis that this algorithm is O(log(n)).

Function 6:

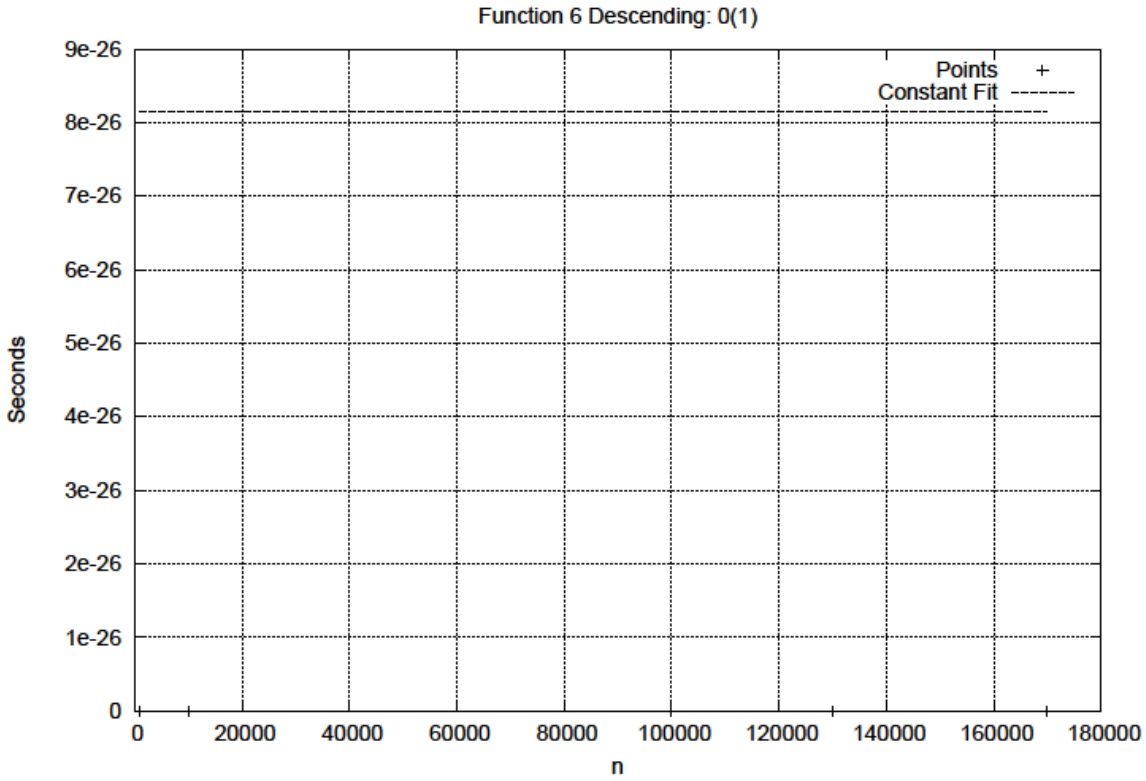
Ascending:



C = 2.24313e^-9 Asymptotic Standard Error: 0.2589%

The low Error supports the hypothesis that this algorithm is O(n^2).

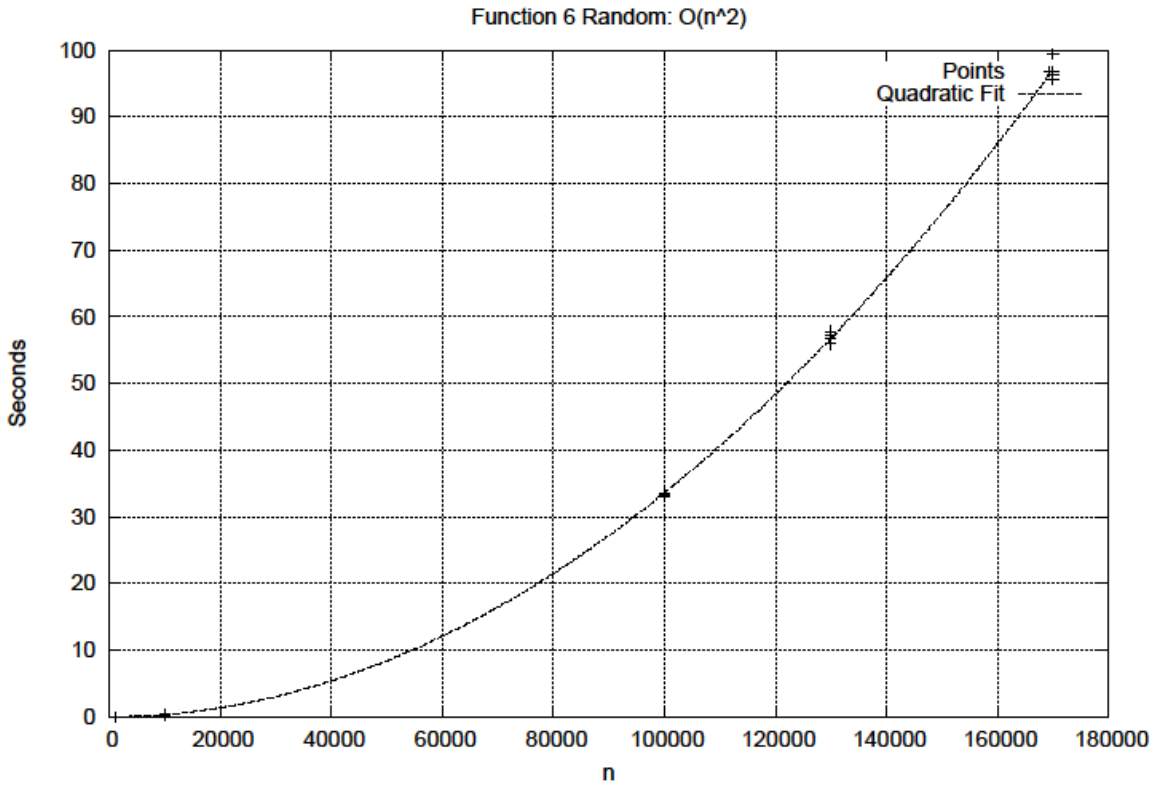
Descending:



C = 2.12197e^-24 Asymptotic Standard Error: N/A

According to gnuplot, the square of the deviations was zero and thus it didn't calculate a %. The runtime however is likely actually O(n) due to the function processing a list, and it ran through the list so quickly the timer could not obtain a time.

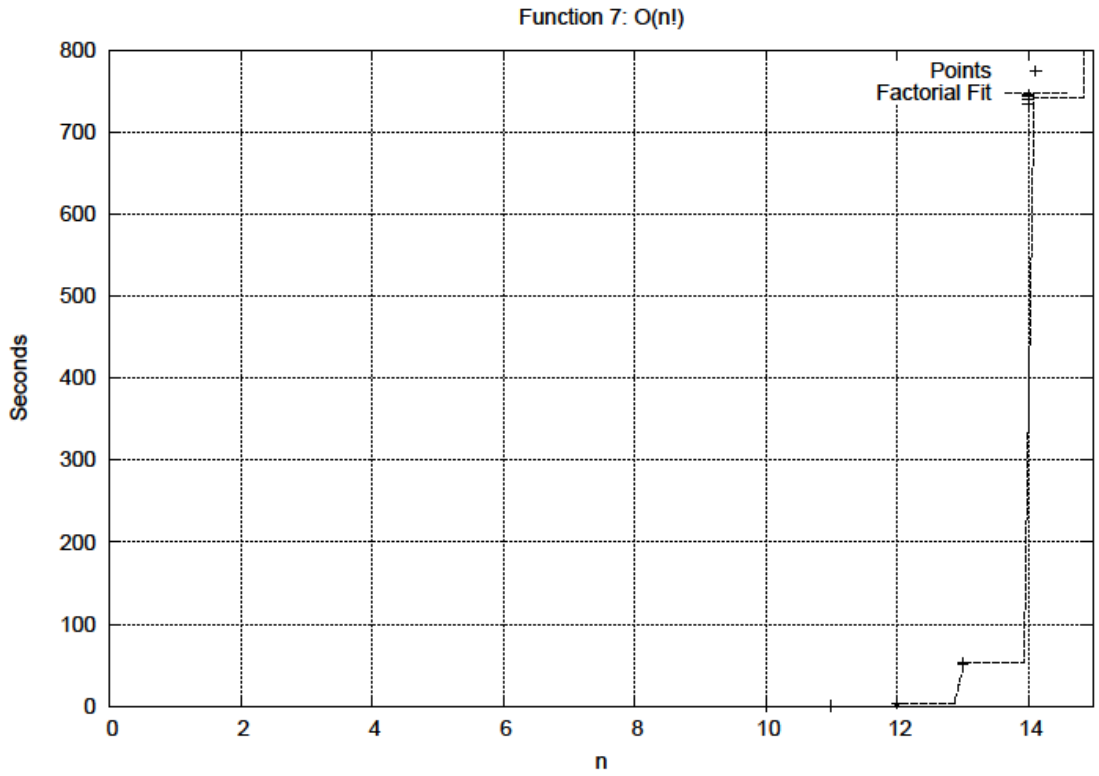
Random:



C = 3.35697e^-9 Asymptotic Standard Error: 0.2753%

The low Error supports the hypothesis that this algorithm is O(n^2).

Function 7:



C = 8.50142e^-9 Asymptotic Standard Error: 0.1163%

The low Error supports the hypothesis that this algorithm is O(n!).