

Two Sum Results		Estimated b	Big-O		Formulas Used	
Size	Elapsed(ms)				b = LOG2(T(2N) / T(N))	
1000	2		2	After empirically measuring the time complexity of this algorithm, the estimated value for b was around two, which is consistent with two nested loops. Therefore, it is evident that this algorithm runs in O(N ²).		
2000	8		2.129283017			
4000	35		2			
8000	140		2.007708095			
16000	563		-			
		Average b ->	2.034247778			
Three Sum Results		Estimated b				
Size	Elapsed(ms)					
250	17		3.062284278	Similarly, we repeated the same test but on the three-sum algorithm. The estimated value for b was around three, which is consistent with three nested loops. From these results, it is apparent that this algorithm runs in O(N ³).		
500	142		2.997457805			
1000	1134		3.000953848			
2000	9078		2.998191127			
4000	72533		-			
		Average b ->	3.014721765			