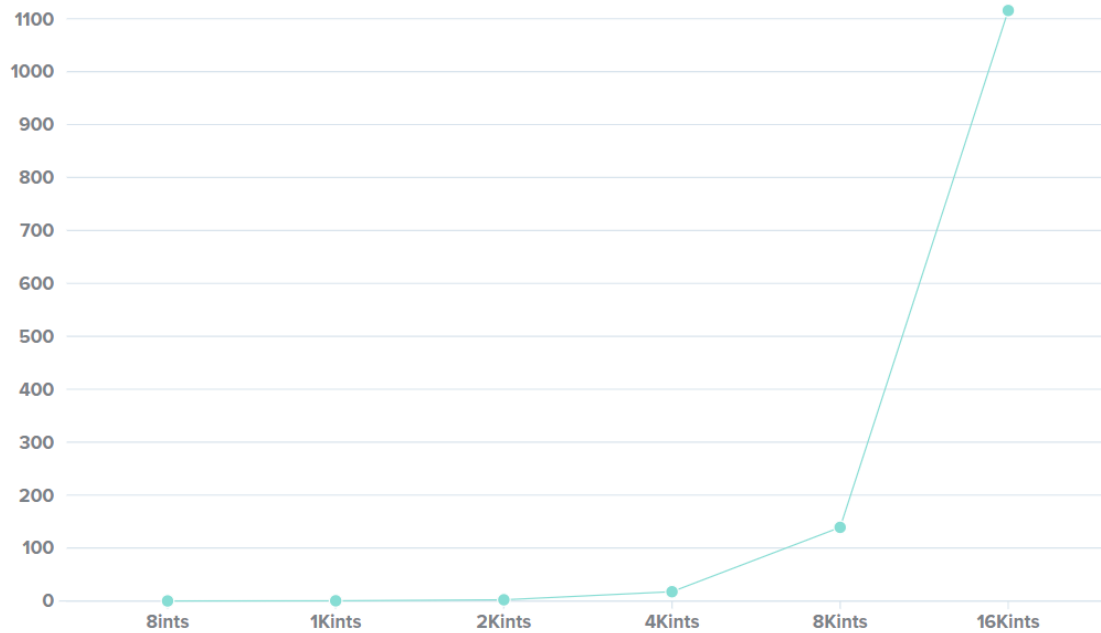


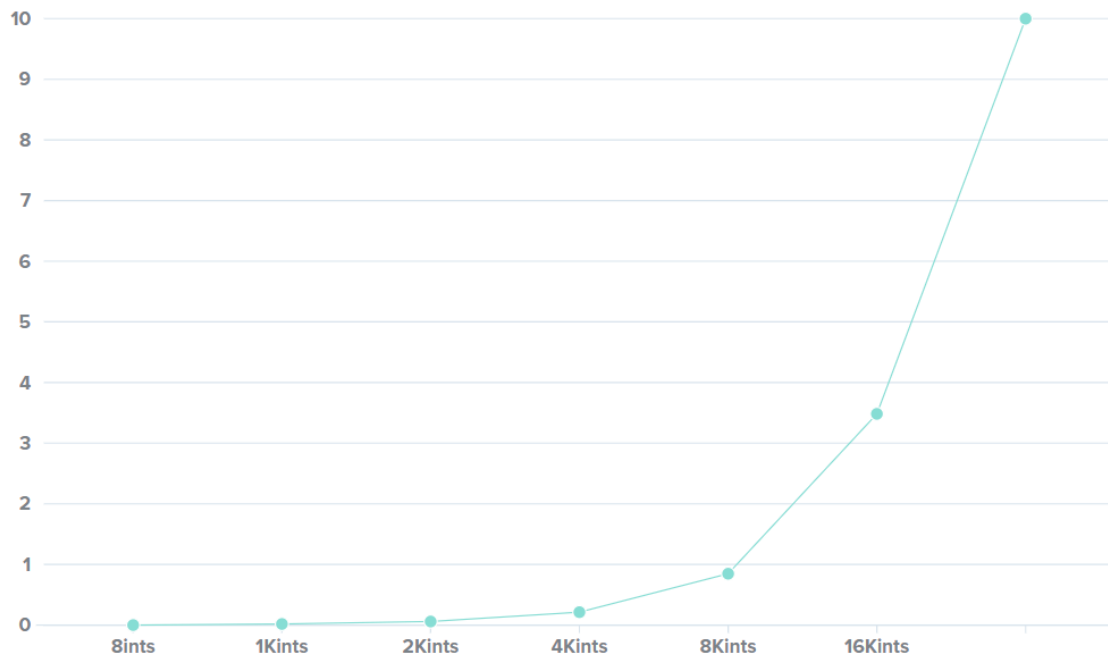
**Practical 2**  
**Worksheet**  
**Ross Murphy – 20207271**

**Three Sum A**



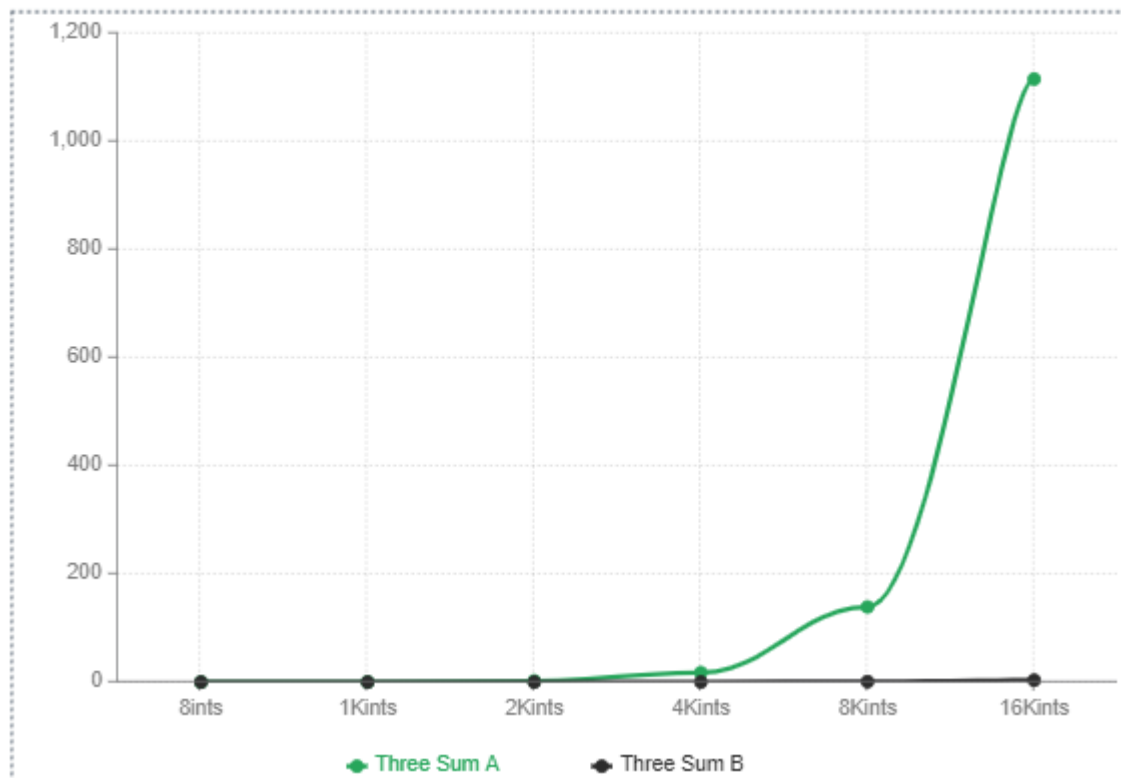
Algorithm	Input	Time	No. of Triplets
ThreeSumA	8ints	0.0	4
	1Kints	0.284	70
	2Kints	2.199	528
	4Kints	17.442	4039
	8Kints	139.031	32074
	16Kints	1115.597	255181

## Three Sum B



Algorithm	Input	Time	No. of Triplets
ThreeSumB	8ints	0.0	4
	1Kints	0.018	70
	2Kints	0.059	528
	4Kints	0.213	4039
	8Kints	0.847	32074
	16Kints	3.483	255181

## Comparison



**Q1.**

Three sum B runs much faster than Three sum A.

**Q2.**

Three sum B has a time complexity of  $n^2 \log n$  run time compared to Three sum A which has time complexity of  $n^3$  making it perform at quadratic speed which is slower than Three sum B.