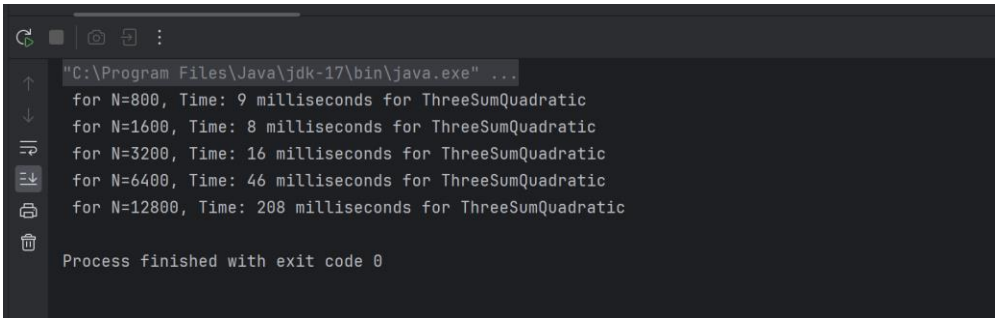
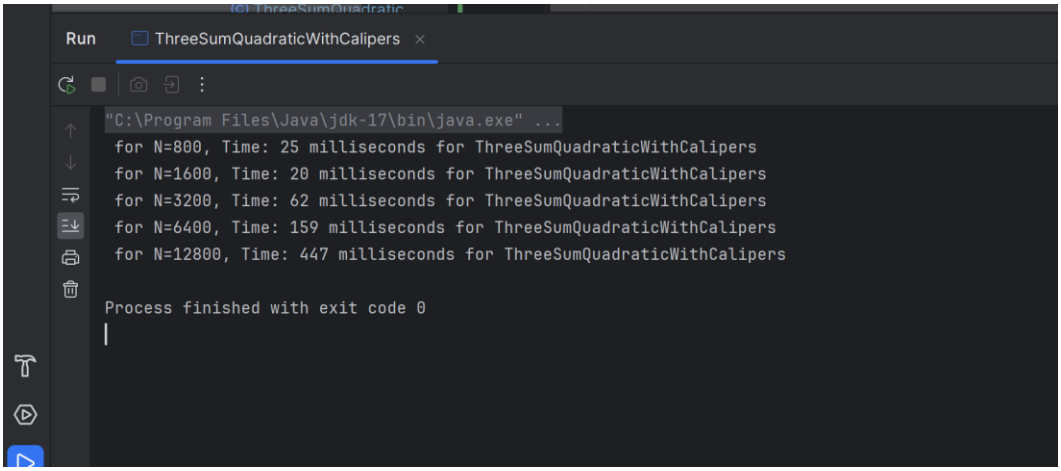
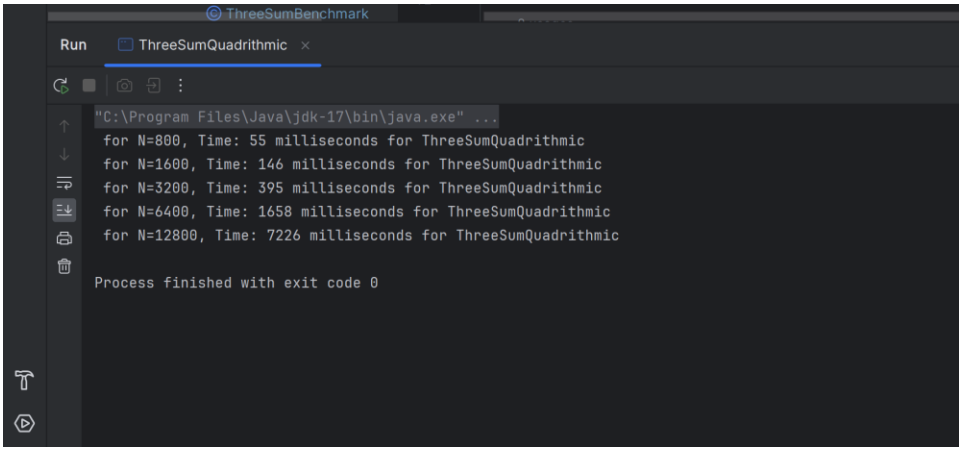
Three Sum Quadratic:



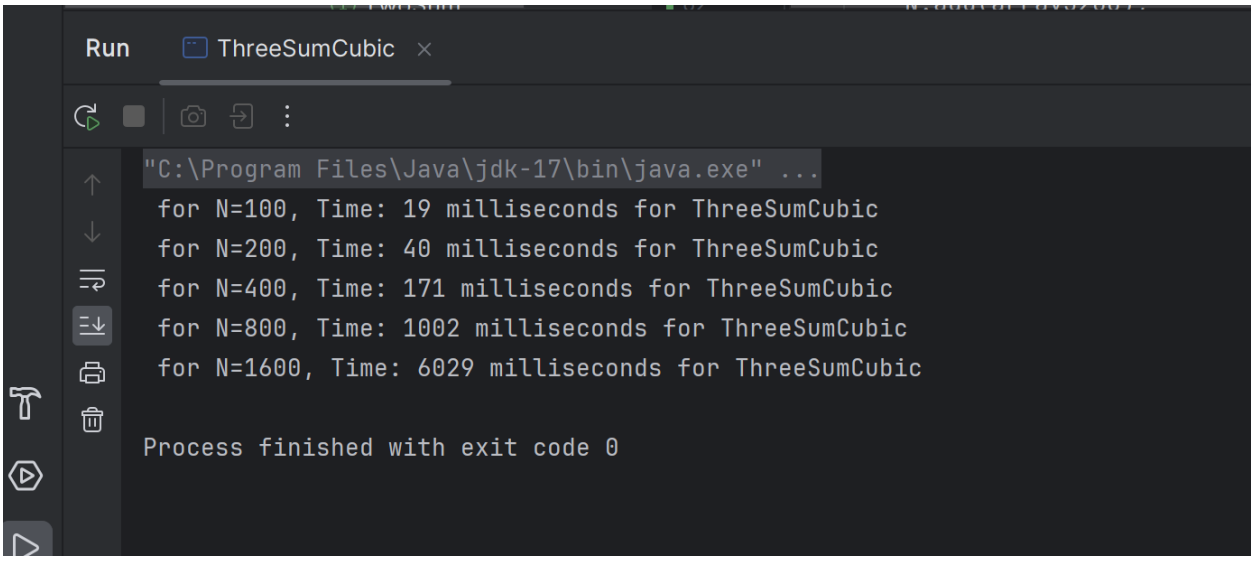
ThreeSumQuadraticWithCalipers:



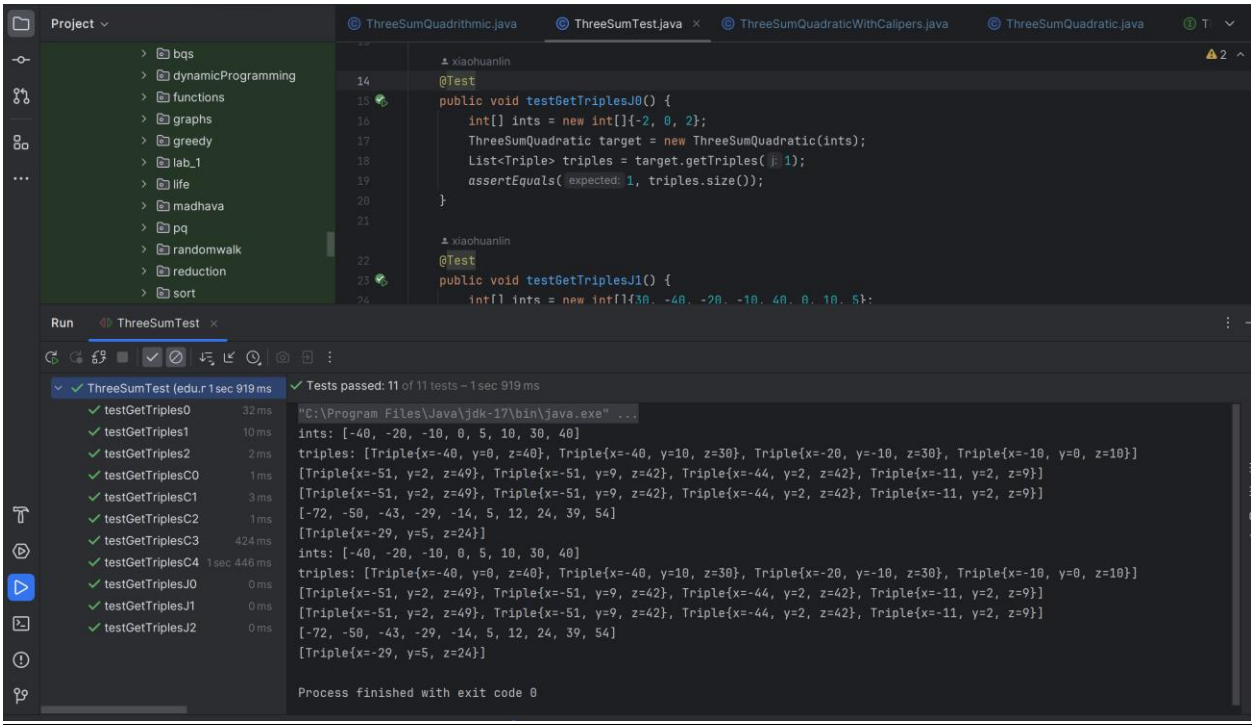
ThreeSumQuadrithmic:



ThreeSumCubic:



a) ***UNIT TEST CASES PASSED:***



b) SPREAD SHEET

	A	B	C	D
1	**N**	**QUADRATIC(milliseconds)**	**QUADRITHMIC(milli)**	
2	400	9	55	
3	800	8	146	
4	1600	16	395	
5	3200	46	1658	
6	6400	208	7226	
7				
8				
9				
10				
11	**N**	**CUBIC(milliseconds)**		
12	100	19		
13	200	40		
14	400	171		
15	800	1002		
16	1600	6029		
17				
18				

c) Why Quadratic Methods Work?

The quadratic method(s) work for solving the 3-SUM problem because the algorithm examines every possible pair of elements in the input array, resulting in a time complexity of O(N^2). This approach ensures that every combination of three elements is considered, allowing for the identification of triplets whose sum equals zero.