## Onyen: chasejf 720497143

		Runtime in "time units"										
N size	type	1	2	3	4	5	6	7	8	9	10	
	<mark>java</mark>	1	0	0	0	1	0	0	0	0	1	
500	mine	4	4	3	4	4	4	4	3	3	8	
	<mark>java</mark>	2	2	1	1	0	0	2	0	1	1	
1000	mine	11	11	8	8	7	8	12	7	8	9	
	java	1	1	1	1	1	1	1	1	1	1	
5000	mine	54	45	35	34	33	35	36	33	24	41	
	<mark>java</mark>	3	2	2	2	2	2	2	2	2	2	
10000	mine	94	85	72	81	77	70	74	79	89	82	
	java	4	5	3	5	5	3	3	5	5	5	

Data was obtained by running and timing each PQ 12 times and removing the smallest and largest times for different values of N.

The Java implementation is much faster, likely because for java's implementation offer() (insert on my PQ) is a  $\Theta(1)$  operation and worst case a O(logN) operation. This is because Java inserts into an ordered structure, instead of changing the array every time like PQasSortedArray.

Runtime: offer() O(logN) insert() O(N)