

Lab Four:

Part 1:

- The output statement is expressed n^2 times
The algorithm is $O(N^2)$
- The output statement is expressed $2n$ times
The algorithm is $O(N)$
- The output statement is expressed by $(n(n+1))/2$
The algorithm is $O(N)$
- The output statement is expressed $n-1$ times
The algorithm is $O(N)$

Part 2:

n =	0	y1 =	10	y2 =	2	y1 > y2
n =	10	y1 =	1010	y2 =	502	y1 > y2
n =	20	y1 =	2010	y2 =	2002	y1 > y2
n =	30	y1 =	3010	y2 =	4502	y1 < y2
n =	40	y1 =	4010	y2 =	8002	y1 < y2
n =	50	y1 =	5010	y2 =	12502	y1 < y2
n =	60	y1 =	6010	y2 =	18002	y1 < y2
n =	70	y1 =	7010	y2 =	24502	y1 < y2
n =	80	y1 =	8010	y2 =	32002	y1 < y2
n =	90	y1 =	9010	y2 =	40502	y1 < y2
n =	100	y1 =	10010	y2 =	50002	y1 < y2

The results do not surprise me because n^2 is bigger than n so the results will get bigger and the n increases. The results show that $y1$ is bigger in the beginning but $y2$ gets bigger because it has an n^2 in it... as expected.
Press any key to continue . . .