

42	17	23	72
0	1	2	3
1	1	1	1

42	17	23	72	55	44	33	24
0	1	2	3	4	5	6	7
				5	1	1	1
				1	1	1	1
				1	1	1	1
sum:				2	2	2	2

42	17	23	72	55	44	33	24	56	71						
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
								9	1						
								1	1	1	1	1	1	1	1
								1	1	1	1	1	1	1	1
sum:								2	2	2	2	2	2	2	2

green: actual runtime

red: amortization: distributing the cost of copying to all the elements that benefit from the larger array

actual cost of inserting