r^0	Size(n)	r^2	simplevector push operations	Optimized operations	with Linked List operations	f(n) Big0(n^2) cs2	f(n) BigO(n) Co2	f(n) BigO(1) Cl3	fit f(n) simplevector	fit f(n) Optimized	fit f(n) with Linked List	+Delta Above simplevector	+Delta Above Optimized	+Delta Above with Linked List	
1	100	10000	43013	1024	1075	40000	1051.20	10.51	43013	1061.60	1036.06	3013	37.60	-38.94	
1	200	40000	166013	2059	2135	160000	2102.40	10.51	166013	2112.80	2087.16	6013	53.80	-47.84	simplevector push
1	300	90000	369013	3167	3141	360000	3153.60	10.51	369013	3164.00	3138.26	9013	-3.00	-2.74	f(n) = c0*x^0 + c1*x^1 + c2*x^2
1	400	160000	652013	4152	4161	640000	4204.80	10.51	652013	4215.20	4189.36	12013	63.20	28.36	f(n) = c0*r^0 + c1*r^1 + c2*r^2
1	500	250000	1015013	5299	5268	1000000	5256.00	10.51	1015013	5266.40	5240.46	15013	-32.60	-27.54	
1	600	360000	1458013	6211	6340	1440000	6307.20	10.51	1458013	6317.60	6291.56	18013	106.60	-48.44	c0 = 13
1	700	490000	1981013	7328	7256	1960000	7358.40	10.51	1981013	7368.80	7342.66	21013	40.80	86.66	c1 = 30
1	800	640000	2584013	8404	8332	2560000	8409.60	10.51	2584013	8420.00	8393.76	24013	16.00	61.76	c2 = 4
1	900	810000	3267013	9446	9392	3240000	9460.80	10.51	3267013	9471.20	9444.86	27013	25.20	52.86	
1	1000	1000000	4030013	10469	10552	4000000	10512.00	10.51	4030013	10522.40	10495.96	30013	53.40	-56.04	
1	1100	1210000	4873013	11477	11592	4840000	11563.20	10.51	4873013	11573.60	11547.06	33013	96.60	-44.94	optimized Simple Vector using arrays
1	1200	1440000	5796013	12524	12661	5760000	12614.40	10.51	5796013	12624.80	12598.16	36013	100.80	-62.84	f(n) =c0 *x^0 + c1 *x^1
1	1300	1690000	6799013	13684	13641	6760000	13665.60	10.51	6799013	13676.00	13649.26	39013	-8.00	8.26	f(n) =c0 *r^0 + c1 *r^1
1	1400	1960000	7882013	14867	14763	7840000	14716.80	10.51	7882013	14727.20	14700.36	42013	-139.80	-62.64	
1	1500	2250000	9045013	15651	15601	9000000	15768.00	10.51	9045013	15778.40	15751.46	45013	127.40	150.46	c0 = 10.396
1	1600	2560000	10288013	16838	16628	10240000	16819.20	10.51	10288013	16829.60	16802.56	48013	-8.40	174.56	c1= 10.512
1	1700	2890000	11611013	17962	17829	11560000	17870.40	10.51	11611013	17880.80	17853.66	51013	-81.20	24.66	
1	1800	3240000	13014013	18959	18873	12960000	18921.60	10.51	13014013	18932.00	18904.76	54013	-27.00	31.76	implemented with a Linked List
1	1900	3610000	14497013	19904	19955	14440000	19972.80	10.51	14497013	19983.20	19955.86	57013	79.20	0.86	f(n) =c0 *x^0 + c1 *x^1
1	2000	4000000	16060013	20774	20978	16000000	21024.00	10.51	16060013	21034.40	21006.96	60013	260.40	28.96	f(n) =c0 *r^0 + c1 *r^1
1	2100	4410000	17703013	22169	21997	17640000	22075.20	10.51	17703013	22085.60	22058.06	63013	-83.40	61.06	
1	2200	4840000	19426013	23002	23032	19360000	23126.40	10.51	19426013	23136.80	23109.16	66013	134.80	77.16	c0 = -15.038
1	2300	5290000	21229013	24160	24426	21160000	24177.60	10.51	21229013	24188.00	24160.26	69013	28.00	-265.74	c1= 10.511
1	2400	5760000	23112013	25287	25252	23040000	25228.80	10.51	23112013	25239.20	25211.36	72013	-47.80	-40.64	
1	2500	6250000	25075013	26307	26262	25000000	26280.00	10.51	25075013	26290.40	26262.46	75013	-16.60	0.46	
1	2600	6760000	27118013	27465	27213	27040000	27331.20	10.51	27118013	27341.60	27313.56	78013	-123.40	100.56	
1	2700	7290000	29241013	28446	28672	29160000	28382.40	10.51	29241013	28392.80	28364.66	81013	-53.20	-307.34	
1	2800	7840000	31444013	29692	29644	31360000	29433.60	10.51	31444013	29444.00	29415.76	84013	-248.00	-228.24	
1	2900	8410000	33727013	30800	30293	33640000	30484.80	10.51	33727013	30495.20	30466.86	87013	-304.80	173.86	
1	3000	9000000	36090013	31404	31492	36000000	31536.00	10.51	36090013	31546.40	31517.96	90013	142.40	25.96	
1	3100	9610000	38533013	32710	32564	38440000	32587.20	10.51	38533013	32597.60	32569.06	93013	-112.40	5.06	
1	3200	10240000	41056013	33654	33540	40960000	33638.40	10.51	41056013	33648.80	33620.16	96013	-5.20	80.16	
1	3300	10890000	43659013	34661	34641	43560000	34689.60	10.51	43659013	34700.00	34671.26	99013	39.00	30.26	
1	3400	11560000	46342013	35661	35881	46240000	35740.80	10.51	46342013	35751.20	35722.36	102013	90.20	-158.64	
1	3500	12250000	49105013	36609	36670	49000000	36792.00	10.51	49105013	36802.40	36773.46	105013	193.40	103.46	
1	3600	12960000	51948013	37651	37742	51840000	37843.20	10.51	51948013	37853.60	37824.56	108013	202.60	82.56	
1	3700	13690000	54871013	38776	38841	54760000	38894.40	10.51	54871013	38904.80	38875.66	111013	128.80	34.66	
1	3800	14440000	57874013	39967	40038	57760000	39945.60	10.51	57874013	39956.00	39926.76	114013	-11.00	-111.24	
1	3900	15210000	60957013	40973	40851	60840000	40996.80	10.51	60957013	41007.20	40977.86	117013	34.20	126.86	
1	4000	16000000	64120013	41955	42065	64000000	42048.00	10.51	64120013	42058.40	42028.96	120013	103.40	-36.04	

Insertions operational analysis

Number of operations

Array size

● Simple Vector   ● optimized   ● Linked LIst