

Sets.add

JMH 1.12 (released 185 days ago, please consider updating!)

Forks: 2 forks

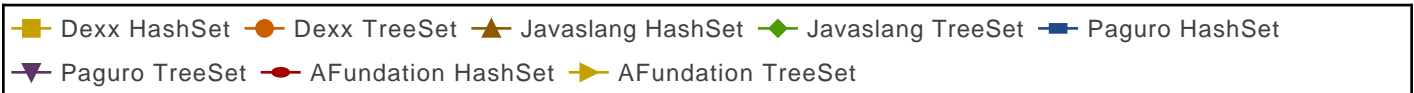
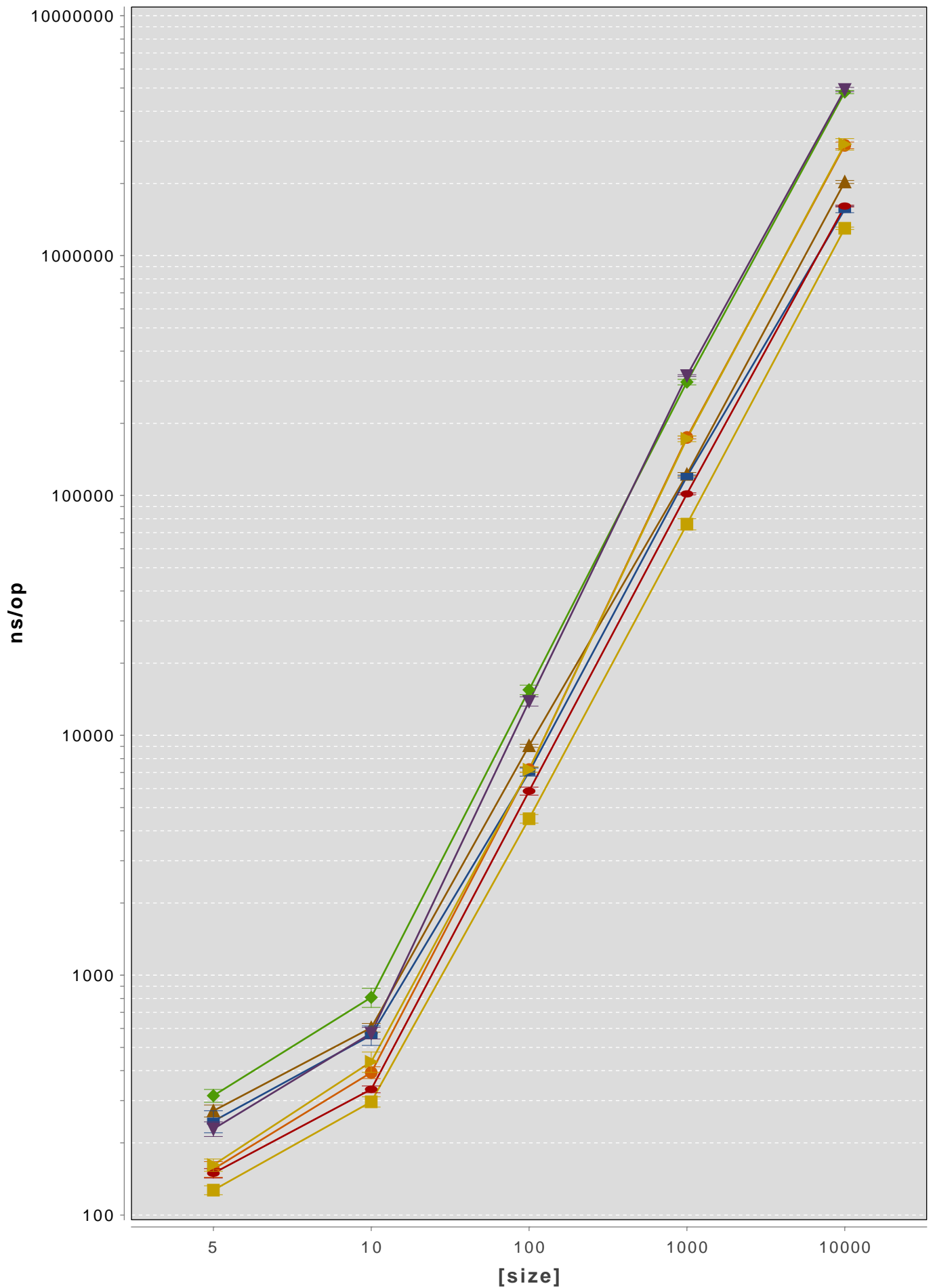
Warmup: 20 iterations, 1 s each

Measurement: 10 iterations, 1 s each

Threads: 1 thread, will synchronize iterations

Benchmark mode: Average time, time/op

implementation	[size]	Score	Error (±)	Unit
Dexx HashSet	5	127.038	5.464	ns/op
Dexx TreeSet	5	155.445	11.625	ns/op
JavaLang HashSet	5	271.937	15.678	ns/op
JavaLang TreeSet	5	314.640	19.345	ns/op
Paguro HashSet	5	246.324	25.946	ns/op
Paguro TreeSet	5	228.597	16.034	ns/op
AFoundation HashSet	5	149.415	6.796	ns/op
AFoundation TreeSet	5	161.768	9.519	ns/op
Dexx HashSet	10	296.659	14.639	ns/op
Dexx TreeSet	10	392.955	22.130	ns/op
JavaLang HashSet	10	604.146	25.104	ns/op
JavaLang TreeSet	10	808.232	73.888	ns/op
Paguro HashSet	10	562.073	52.353	ns/op
Paguro TreeSet	10	573.603	31.346	ns/op
AFoundation HashSet	10	334.430	10.878	ns/op
AFoundation TreeSet	10	435.852	42.339	ns/op
Dexx HashSet	100	4491.327	186.496	ns/op
Dexx TreeSet	100	7202.752	176.873	ns/op
JavaLang HashSet	100	9048.773	133.867	ns/op
JavaLang TreeSet	100	15484.889	711.481	ns/op
Paguro HashSet	100	7034.722	272.896	ns/op
Paguro TreeSet	100	13861.573	615.340	ns/op
AFoundation HashSet	100	5858.100	222.925	ns/op
AFoundation TreeSet	100	7200.567	180.970	ns/op
Dexx HashSet	1000	75969.727	4036.441	ns/op
Dexx TreeSet	1000	174587.970	2361.930	ns/op
JavaLang HashSet	1000	122492.731	2175.789	ns/op
JavaLang TreeSet	1000	297233.762	7926.962	ns/op
Paguro HashSet	1000	120057.779	1683.406	ns/op
Paguro TreeSet	1000	316186.890	2649.684	ns/op
AFoundation HashSet	1000	101591.278	958.703	ns/op
AFoundation TreeSet	1000	172475.565	4813.725	ns/op
Dexx HashSet	10000	1300877.726	14812.111	ns/op
Dexx TreeSet	10000	2883210.920	90424.811	ns/op
JavaLang HashSet	10000	2028992.427	29080.477	ns/op
JavaLang TreeSet	10000	4810348.471	73181.449	ns/op
Paguro HashSet	10000	1560613.844	49611.298	ns/op
Paguro TreeSet	10000	4929249.530	100763.519	ns/op
AFoundation HashSet	10000	1610048.378	13181.807	ns/op
AFoundation TreeSet	10000	2916884.961	159448.677	ns/op



Sets.build

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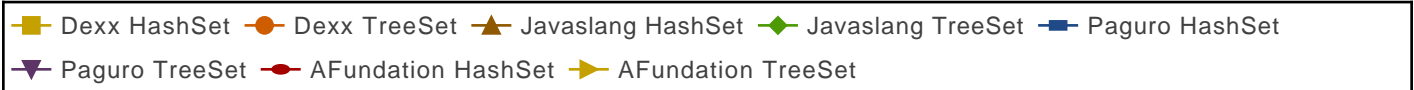
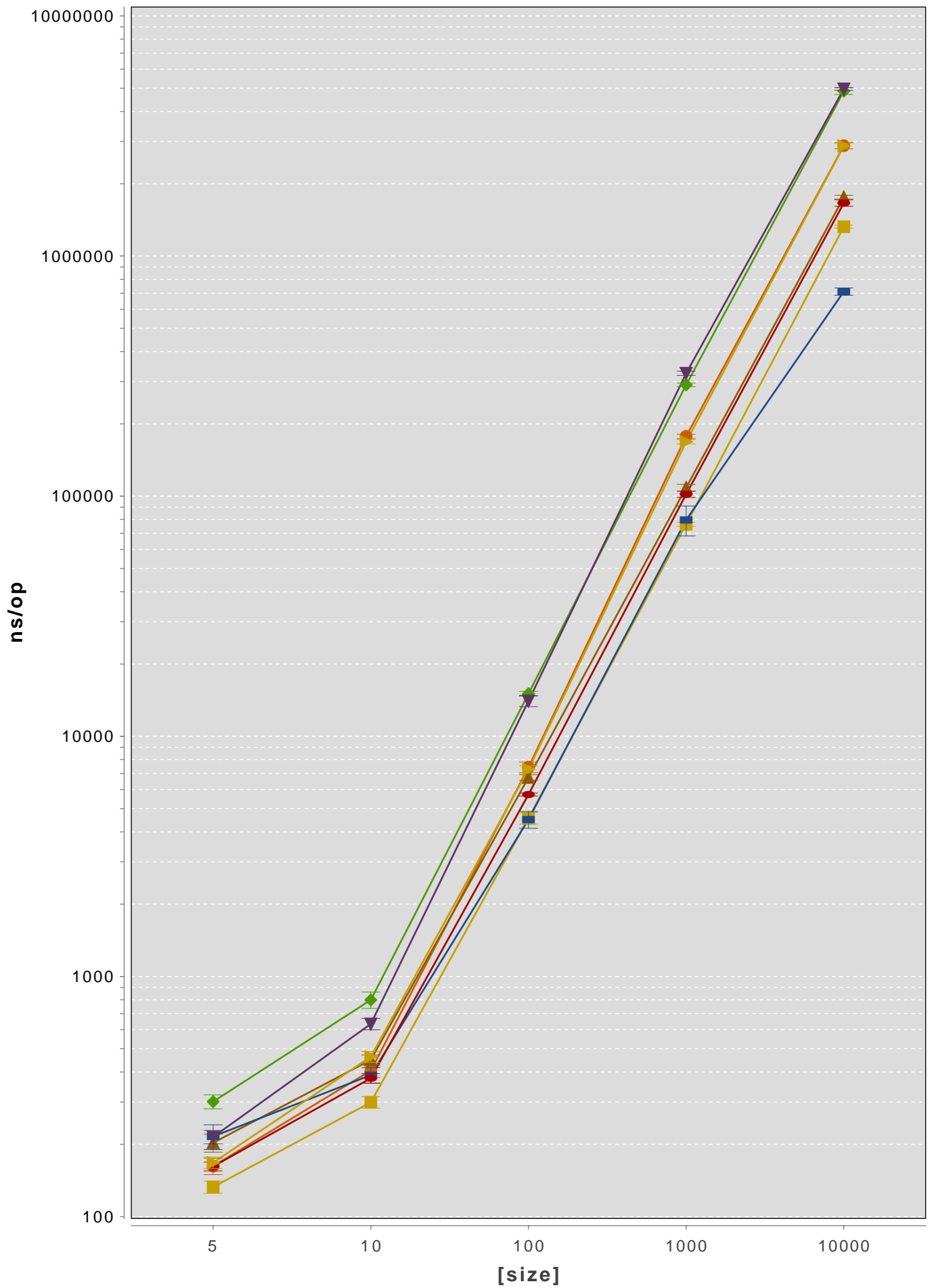
Warmup: 20 iterations, 1 s each

Measurement: 10 iterations, 1 s each

Threads: 1 thread, will synchronize iterations

Benchmark mode: Average time, time/op

implementation	[size]	Score	Error (±)	Unit
Dexx HashSet	5	132.757	7.698	ns/op
Dexx TreeSet	5	162.227	12.715	ns/op
Javaslang HashSet	5	202.963	17.459	ns/op
Javaslang TreeSet	5	301.064	20.005	ns/op
Paguro HashSet	5	215.573	25.461	ns/op
Paguro TreeSet	5	214.676	13.785	ns/op
AFoundation HashSet	5	161.727	6.854	ns/op
AFoundation TreeSet	5	167.690	9.128	ns/op
Dexx HashSet	10	299.173	16.320	ns/op
Dexx TreeSet	10	405.547	25.042	ns/op
Javaslang HashSet	10	449.107	21.439	ns/op
Javaslang TreeSet	10	798.356	62.501	ns/op
Paguro HashSet	10	388.119	29.105	ns/op
Paguro TreeSet	10	634.274	34.638	ns/op
AFoundation HashSet	10	376.836	17.181	ns/op
AFoundation TreeSet	10	462.957	24.358	ns/op
Dexx HashSet	100	4557.084	253.132	ns/op
Dexx TreeSet	100	7436.575	378.202	ns/op
Javaslang HashSet	100	6736.168	182.522	ns/op
Javaslang TreeSet	100	15049.106	348.274	ns/op
Paguro HashSet	100	4501.403	360.535	ns/op
Paguro TreeSet	100	14045.048	751.045	ns/op
AFoundation HashSet	100	5722.993	79.750	ns/op
AFoundation TreeSet	100	7289.949	244.398	ns/op
Dexx HashSet	1000	76379.790	1459.270	ns/op
Dexx TreeSet	1000	177574.401	3616.449	ns/op
Javaslang HashSet	1000	108510.208	3573.313	ns/op
Javaslang TreeSet	1000	290828.894	4899.537	ns/op
Paguro HashSet	1000	79634.605	11333.946	ns/op
Paguro TreeSet	1000	325075.437	6627.808	ns/op
AFoundation HashSet	1000	101925.078	3111.464	ns/op
AFoundation TreeSet	1000	168490.385	3462.367	ns/op
Dexx HashSet	10000	1325027.624	19062.619	ns/op
Dexx TreeSet	10000	2881939.472	84626.365	ns/op
Javaslang HashSet	10000	1758515.743	32719.700	ns/op
Javaslang TreeSet	10000	4862365.879	157773.870	ns/op
Paguro HashSet	10000	711656.364	25034.421	ns/op
Paguro TreeSet	10000	4969367.449	65893.314	ns/op
AFoundation HashSet	10000	1663487.137	51683.825	ns/op
AFoundation TreeSet	10000	2875173.763	76802.604	ns/op



Sets.contains

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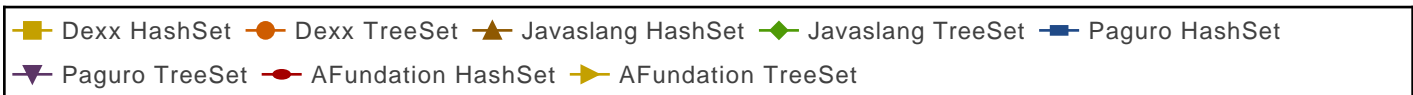
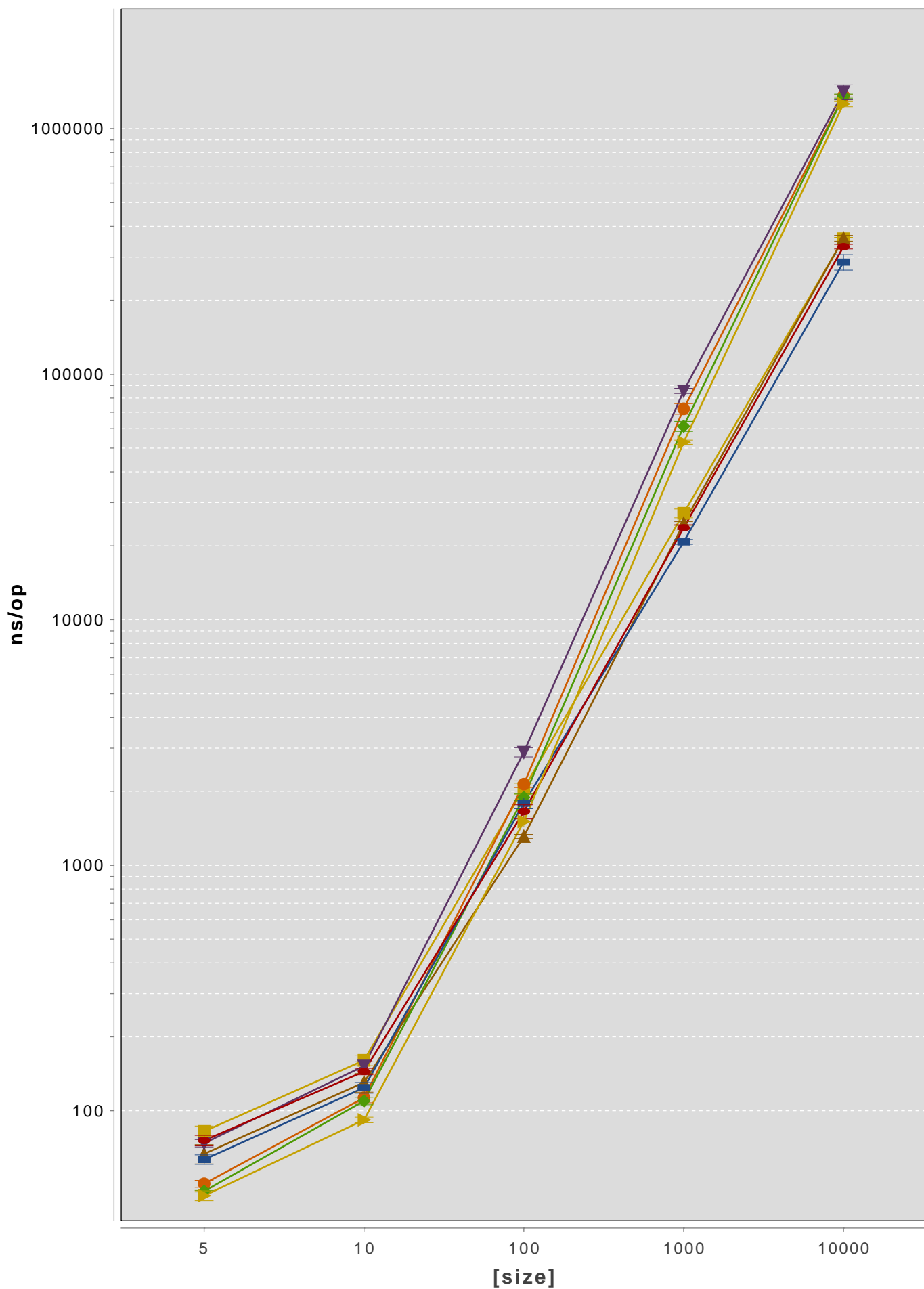
Warmup: 20 iterations, 1 s each

Measurement: 10 iterations, 1 s each

Threads: 1 thread, will synchronize iterations

Benchmark mode: Average time, time/op

implementation	[size]	Score	Error (±)	Unit
Dexx HashSet	5	82.386	4.213	ns/op
Dexx TreeSet	5	50.393	1.647	ns/op
Javastlang HashSet	5	66.709	6.037	ns/op
Javastlang TreeSet	5	47.011	0.323	ns/op
Paguro HashSet	5	63.273	2.809	ns/op
Paguro TreeSet	5	73.736	2.543	ns/op
AFoundation HashSet	5	75.665	3.684	ns/op
AFoundation TreeSet	5	45.065	2.083	ns/op
Dexx HashSet	10	160.418	7.898	ns/op
Dexx TreeSet	10	112.904	5.177	ns/op
Javastlang HashSet	10	130.332	11.325	ns/op
Javastlang TreeSet	10	109.588	3.871	ns/op
Paguro HashSet	10	124.071	6.218	ns/op
Paguro TreeSet	10	152.137	6.088	ns/op
AFoundation HashSet	10	144.366	4.396	ns/op
AFoundation TreeSet	10	91.748	2.405	ns/op
Dexx HashSet	100	2054.125	104.177	ns/op
Dexx TreeSet	100	2139.626	66.299	ns/op
Javastlang HashSet	100	1309.094	25.504	ns/op
Javastlang TreeSet	100	1890.303	59.401	ns/op
Paguro HashSet	100	1790.522	90.128	ns/op
Paguro TreeSet	100	2887.485	125.488	ns/op
AFoundation HashSet	100	1653.029	109.605	ns/op
AFoundation TreeSet	100	1507.719	76.020	ns/op
Dexx HashSet	1000	27131.124	1122.710	ns/op
Dexx TreeSet	1000	72270.962	3579.102	ns/op
Javastlang HashSet	1000	24659.475	417.145	ns/op
Javastlang TreeSet	1000	61375.258	2885.744	ns/op
Paguro HashSet	1000	20755.484	475.153	ns/op
Paguro TreeSet	1000	85556.895	2099.299	ns/op
AFoundation HashSet	1000	23670.457	700.858	ns/op
AFoundation TreeSet	1000	52832.870	1047.600	ns/op
Dexx HashSet	10000	356448.952	4733.106	ns/op
Dexx TreeSet	10000	1360162.687	14958.724	ns/op
Javastlang HashSet	10000	357651.020	10178.895	ns/op
Javastlang TreeSet	10000	1356467.098	26084.572	ns/op
Paguro HashSet	10000	286157.943	20823.362	ns/op
Paguro TreeSet	10000	1413349.237	94907.036	ns/op
AFoundation HashSet	10000	330738.937	7124.113	ns/op
AFoundation TreeSet	10000	1262245.663	34048.624	ns/op



Sets.iterate

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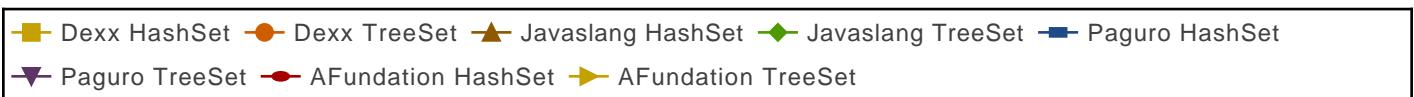
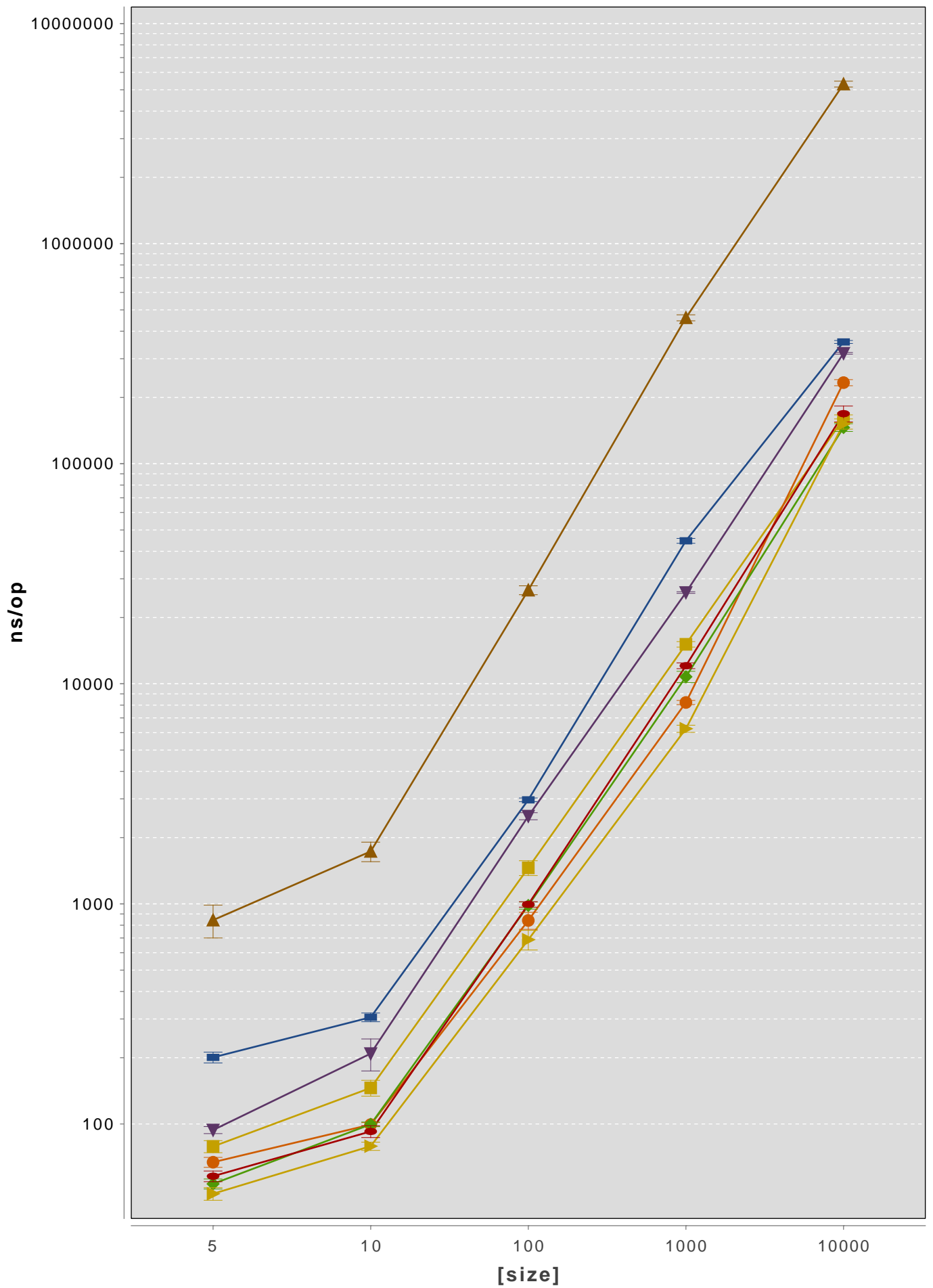
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Benchmark mode: Average time, time/op

implementation	[size]	Score	Error (±)	Unit
Dexx HashSet	5	79.018	4.972	ns/op
Dexx TreeSet	5	67.017	3.482	ns/op
Javaslang HashSet	5	843.761	143.734	ns/op
Javaslang TreeSet	5	53.431	2.811	ns/op
Paguro HashSet	5	200.706	11.374	ns/op
Paguro TreeSet	5	93.854	3.445	ns/op
AFoundation HashSet	5	57.904	3.225	ns/op
AFoundation TreeSet	5	48.192	3.173	ns/op
Dexx HashSet	10	145.828	12.044	ns/op
Dexx TreeSet	10	99.348	2.017	ns/op
Javaslang HashSet	10	1731.702	176.136	ns/op
Javaslang TreeSet	10	99.606	2.407	ns/op
Paguro HashSet	10	305.319	13.953	ns/op
Paguro TreeSet	10	208.772	34.621	ns/op
AFoundation HashSet	10	92.487	5.747	ns/op
AFoundation TreeSet	10	79.262	3.422	ns/op
Dexx HashSet	100	1457.750	112.710	ns/op
Dexx TreeSet	100	840.587	74.370	ns/op
Javaslang HashSet	100	26636.093	1238.227	ns/op
Javaslang TreeSet	100	983.409	36.629	ns/op
Paguro HashSet	100	2970.020	56.796	ns/op
Paguro TreeSet	100	2503.735	92.350	ns/op
AFoundation HashSet	100	994.799	28.488	ns/op
AFoundation TreeSet	100	687.611	70.345	ns/op
Dexx HashSet	1000	15116.132	436.906	ns/op
Dexx TreeSet	1000	8225.561	178.774	ns/op
Javaslang HashSet	1000	460454.292	14453.619	ns/op
Javaslang TreeSet	1000	10761.527	636.220	ns/op
Paguro HashSet	1000	44639.080	1138.206	ns/op
Paguro TreeSet	1000	25979.408	221.237	ns/op
AFoundation HashSet	1000	12080.466	365.275	ns/op
AFoundation TreeSet	1000	6250.704	233.352	ns/op
Dexx HashSet	10000	160196.532	6495.577	ns/op
Dexx TreeSet	10000	233559.118	7433.294	ns/op
Javaslang HashSet	10000	5308863.198	163853.651	ns/op
Javaslang TreeSet	10000	146036.205	5919.823	ns/op
Paguro HashSet	10000	357468.084	5547.877	ns/op
Paguro TreeSet	10000	317407.713	2762.107	ns/op
AFoundation HashSet	10000	168840.446	14000.679	ns/op
AFoundation TreeSet	10000	151714.813	8146.189	ns/op



Sets.remove

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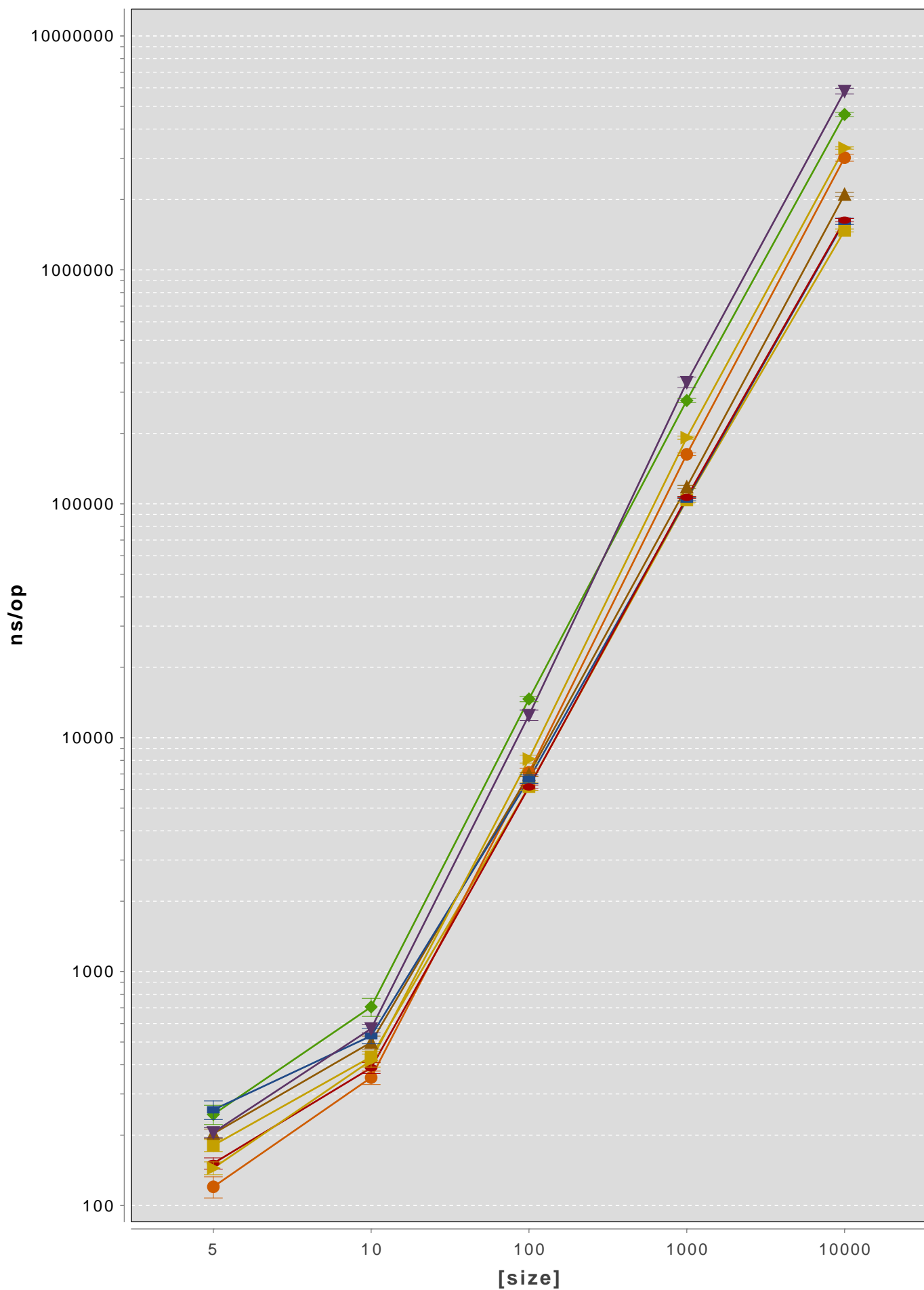
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implementation	[size]	Score	Error (±)	Unit
Dexx HashSet	5	180.806	10.822	ns/op
Dexx TreeSet	5	120.225	12.480	ns/op
JavaLang HashSet	5	203.007	9.345	ns/op
JavaLang TreeSet	5	245.231	23.238	ns/op
Paguro HashSet	5	256.683	23.387	ns/op
Paguro TreeSet	5	205.213	9.831	ns/op
AFoundation HashSet	5	151.458	8.416	ns/op
AFoundation TreeSet	5	144.552	9.126	ns/op
Dexx HashSet	10	432.049	24.365	ns/op
Dexx TreeSet	10	352.477	23.229	ns/op
JavaLang HashSet	10	498.459	31.877	ns/op
JavaLang TreeSet	10	706.642	63.033	ns/op
Paguro HashSet	10	531.409	40.009	ns/op
Paguro TreeSet	10	570.507	23.036	ns/op
AFoundation HashSet	10	387.949	20.993	ns/op
AFoundation TreeSet	10	417.070	26.546	ns/op
Dexx HashSet	100	6185.198	231.669	ns/op
Dexx TreeSet	100	7108.039	285.782	ns/op
JavaLang HashSet	100	6962.399	133.146	ns/op
JavaLang TreeSet	100	14633.444	385.911	ns/op
Paguro HashSet	100	6653.807	282.829	ns/op
Paguro TreeSet	100	12483.520	645.276	ns/op
AFoundation HashSet	100	6158.720	108.714	ns/op
AFoundation TreeSet	100	8111.425	316.564	ns/op
Dexx HashSet	1000	103891.030	2764.520	ns/op
Dexx TreeSet	1000	162809.397	2238.705	ns/op
JavaLang HashSet	1000	117936.517	2024.845	ns/op
JavaLang TreeSet	1000	276402.337	5741.855	ns/op
Paguro HashSet	1000	104696.035	1683.580	ns/op
Paguro TreeSet	1000	330674.691	17521.277	ns/op
AFoundation HashSet	1000	106625.576	1072.689	ns/op
AFoundation TreeSet	1000	191764.869	2848.010	ns/op
Dexx HashSet	10000	1474599.210	20567.935	ns/op
Dexx TreeSet	10000	3019572.529	105580.183	ns/op
JavaLang HashSet	10000	2100054.069	44615.529	ns/op
JavaLang TreeSet	10000	4618012.102	102349.490	ns/op
Paguro HashSet	10000	1613549.743	49543.039	ns/op
Paguro TreeSet	10000	5810579.067	163464.053	ns/op
AFoundation HashSet	10000	1631697.241	26941.944	ns/op
AFoundation TreeSet	10000	3318909.650	37745.977	ns/op



— Dexx HashSet — Dexx TreeSet — Javalang HashSet — Javalang TreeSet — Paguro HashSet
— Paguro TreeSet — AFundation HashSet — AFundation TreeSet