

## Benchmark Results

<i>all times in <math>\mu</math>s</i>	<b>C++98</b>		<b>Crystal 1.0</b>		<b>Node.js</b>		<b>LuaJIT 2.0</b>		<b>OBXLJ</b>		<b>OBXMC 21-09-12</b>		<b>OBXMC 21-08-28</b>		<b>ObxIDE 0.9.38</b>		
	<b>gcc -O2</b>	<b>average</b>	<b>factor</b>	<b>average</b>	<b>factor</b>	<b>average</b>	<b>factor</b>	<b>average</b>	<b>factor</b>	<b>2021-07-11</b>	<b>average</b>	<b>factor</b>	<b>Mono3</b>	<b>average</b>	<b>factor</b>	<b>Mono5</b>	<b>average</b>
<b>Benchmark:</b>	<i>n</i>	<i>average</i>	<i>factor</i>	<i>average</i>	<i>factor</i>	<i>average</i>	<i>factor</i>	<i>average</i>	<i>factor</i>	<i>average</i>	<i>factor</i>	<i>average</i>	<i>factor</i>	<i>average</i>	<i>factor</i>	<i>average</i>	<i>factor</i>
DeltaBlue	12000/1	25	0.1	18	0.1	63	0.2	348	1.0	113	0.3	32	0.1	41	0.1	28	0.1
Richards	100/1	3'721	0.1	1'877	0.05	5'773	0.1	39'705	1.0	22'785	0.6	6'479	0.2	7'321	0.2	2'880	0.1
Json	100/1	3'975	0.5	3'196	0.4	4'803	0.6	7'859	1.0	162'598	20.7	7'073	0.9	8'948	1.1	3'946	0.5
Havlak	10/1	221'753	0.03	984'323	0.1	481'671	0.1	8'185'360	1.0	4'441'696	0.5	1'069'822	0.1	1'151'781	0.1	740'127	0.1
CD	250/2	1'570	0.1	1'755	0.1	2'019	0.1	14'751	1.0	12'122	0.8	1'820	0.1	1'949	0.1	1'347	0.1
Bounce	1500/1	43	0.2	61	0.2	119	0.5	249	1.0	189	0.8	116	0.5	126	0.5	68	0.3
List	1500/1	76	0.1	67	0.1	208	0.3	676	1.0	666	1.0	199	0.3	222	0.3	90	0.1
Mandelbrot	500/1	1	0.5	1	0.5	12	6.0	2	1.0	2	1.0	2	1.0	11	5.5	1	0.5
NBody	250000/1	1	0.1			3	0.4	8	1.0	5	0.6	4	0.5	9	1.1	3	0.4
Permute	1000/1	120	0.4	202	0.6	168	0.5	328	1.0	566	1.7	220	0.7	272	0.8	132	0.4
Queens	1000/1	165	0.6	160	0.5	231	0.8	297	1.0	297	1.0	210	0.7	228	0.8	148	0.5
Sieve	3000/1	30	0.3	56	0.5	103	0.9	119	1.0	93	0.8	84	0.7	99	0.8	31	0.3
Storage	1000/1	741	0.3	778	0.4	310	0.1	2'202	1.0	2'214	1.0	337	0.2	384	0.2	533	0.2
Towers	600/1	159	0.5	275	0.9	307	1.0	299	1.0	507	1.7	500	1.7	482	1.6	260	0.9
sum of averages:		232'380	0.03	992'769	0.12	495'790	0.06	8'252'203	1.0	4'643'853	0.6	1'086'898	0.13	1'171'873	0.14	749'594	0.09
geomean of factors:			0.19		0.24		0.39		1.0		1.04		0.38		0.51		0.24
1/geomean:			5.15		4.15		2.54		1.00		0.96		2.64		1.98		4.21

Benchmarks used from <https://github.com/smarr/are-we-fast-yet> commit 770c664 3.4.2020  
and <https://github.com/rochus-keller/Are-we-fast-yet>

Mono 3.12.1      Mono 5.20.1.34      gcc 4.8.2 -O2  
Boem GC 7.2d

Measurements done between 2021-07-07 - 2021-12-30 and June 2023 (C++98)

Testmachine: HP EliteBook 2530p, Intel Core Duo L9400 1.86GHz, 4GB RAM, Linux i386

All binaries compiled with GCC 4.8.2

LuaJIT params, deviations from default values:

```
maxtrace      100000
maxrecord     40000
maxside       100
maxsnap       1000
sizemcode     64
maxmcode      5120
```

vs. Mono 3:      1.33  
vs. Mono 5:                      2.13  
vs. C++98:      0.38              0.82  
1/C++98:      2.60                      1.22