

```
> ./LjSOM Benchmarks/All.som -cp LanguageFeatures -trace
```

```
LjSOM version: 0.7.3 license: GPL; see http://github.com/rochus-keller/Som  
based on LuaJIT 2.0.5 Copyright (C) 2005-2020 Mike Pall http://luajit.org/  
JIT: ON CMOV SSE2 SSE3 SSE4.1 fold cse dce fwd dse narrow loop abc sink fuse
```

```
Start execution of all benchmarks. Iterations: 100
```

```
Starting Fibonacci benchmark ... warmup ...
```

```
[TRACE 1 "SomPrimitives":582 return]  
[TRACE --- (1/1) "SomPrimitives":454 -- NYI: bytecode 48 at ":/Smalltalk/Integer.som":53:64]  
[TRACE --- (1/1) "SomPrimitives":454 -- NYI: bytecode 48 at ":/Smalltalk/Integer.som":53:64]  
[TRACE --- (1/1) "SomPrimitives":454 -- NYI: bytecode 48 at ":/Smalltalk/Integer.som":53:64]  
[TRACE --- (1/1) "SomPrimitives":454 -- NYI: bytecode 48 at ":/Smalltalk/Integer.som":53:64]  
[TRACE 2 (1/1) "SomPrimitives":454 -- fallback to interpreter]  
[TRACE --- (1/0) "SomPrimitives":583 -- NYI: bytecode 48 at ":/Smalltalk/Integer.som":53:64]  
[TRACE --- ":/Smalltalk/Integer.som":53:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- (1/0) "SomPrimitives":583 -- NYI: bytecode 48 at ":/Smalltalk/Integer.som":53:64]  
[TRACE --- (1/0) "SomPrimitives":583 -- NYI: bytecode 48 at ":/Smalltalk/Integer.som":53:64]  
[TRACE --- (1/0) "SomPrimitives":583 -- NYI: bytecode 48 at ":/Smalltalk/Integer.som":53:64]  
[TRACE 3 "SomPrimitives":381 return]  
[TRACE --- Fibonacci.som:33:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE 4 (1/0) "SomPrimitives":583 -- fallback to interpreter]  
[TRACE 5 "SomPrimitives":376 return]  
[TRACE 6 "SomPrimitives":458 return]  
[TRACE --- ":/Smalltalk/Integer.som":53:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- Fibonacci.som:33:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- (6/1) "SomPrimitives":459 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- (6/1) "SomPrimitives":459 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- (6/1) "SomPrimitives":459 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- (6/1) "SomPrimitives":459 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE 7 (6/1) "SomPrimitives":459 -- fallback to interpreter]  
[TRACE --- ":/Smalltalk/Integer.som":53:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- Fibonacci.som:33:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- ":/Smalltalk/Integer.som":53:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- Fibonacci.som:33:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- ":/Smalltalk/Integer.som":53:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- Fibonacci.som:33:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- ":/Smalltalk/Integer.som":53:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- Fibonacci.som:33:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- ":/Smalltalk/Integer.som":53:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- Fibonacci.som:33:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- ":/Smalltalk/Integer.som":53:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- Fibonacci.som:33:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- ":/Smalltalk/Integer.som":53:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- Fibonacci.som:33:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- ":/Smalltalk/Integer.som":53:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- Fibonacci.som:33:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- ":/Smalltalk/Integer.som":53:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- Fibonacci.som:33:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- ":/Smalltalk/Integer.som":53:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":53:44]  
[TRACE --- Fibonacci.som:33:5 -- blacklisted at ":/Smalltalk/Integer.som":53:5]  
completed.  
[TRACE --- Benchmark.som:46:33 -- NYI: bytecode 48 at Benchmark.som:51:5]  
[TRACE --- "SomPrimitives":604 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]  
[TRACE --- Benchmark.som:46:33 -- blacklisted at Fibonacci.som:33:5]  
[TRACE 8 "SomPrimitives":577 return]  
[TRACE 9 "SomPrimitives":453 return]  
[TRACE --- "SomPrimitives":360 -- leaving loop in root trace at BenchmarkHarness.som:143:33]
```

```
[TRACE --- BenchmarkHarness.som:138:31 -- inner loop in root trace at Benchmark.som:46:11]
[TRACE --- ":/Smalltalk/Object.som":52:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- Fibonacci.som:28:5 -- blacklisted at Fibonacci.som:33:5]
[TRACE --- Benchmark.som:46:33 -- NYI: bytecode 48 at Benchmark.som:51:5]
[TRACE --- Benchmark.som:43:5 -- inner loop in root trace at Benchmark.som:46:11]
[TRACE --- "SomPrimitives":360 -- leaving loop in root trace at BenchmarkHarness.som:143:33]
[TRACE --- BenchmarkHarness.som:138:31 -- inner loop in root trace at Benchmark.som:46:11]
[TRACE --- ":/Smalltalk/Object.som":52:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE 10 Fibonacci.som:39:5 return]
[TRACE --- "SomPrimitives":364 -- NYI: FastFunc collectgarbage at "SomPrimitives":365]
```

Benchmark: Fibonacci

Iterations: 100 (elapsed time 2477 ms)

AVERAGE: 25 ms

Starting Dispatch benchmark ... warmup ...

```
[TRACE --- ":/Smalltalk/Integer.som":71:24 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- ":/Smalltalk/Integer.som":71:24 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE 11 "SomPrimitives":611 return]
[TRACE --- ":/Smalltalk/Integer.som":71:24 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- ":/Smalltalk/Integer.som":71:24 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- ":/Smalltalk/Integer.som":71:24 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- ":/Smalltalk/Integer.som":71:24 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- ":/Smalltalk/Integer.som":71:24 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- ":/Smalltalk/Integer.som":71:24 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- ":/Smalltalk/Integer.som":71:24 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE 12 Dispatch.som:35:5 return]
[TRACE 13 Dispatch.som:0:0 return]
[TRACE --- (11/0) "SomPrimitives":612 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- (11/0) "SomPrimitives":612 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- (11/0) "SomPrimitives":612 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- (11/0) "SomPrimitives":612 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE 14 (11/0) "SomPrimitives":612 -- fallback to interpreter]
[TRACE --- ":/Smalltalk/Integer.som":71:24 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- ":/Smalltalk/Integer.som":71:24 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
completed.
[TRACE --- ":/Smalltalk/Integer.som":51:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- "SomPrimitives":604 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- Benchmark.som:43:5 -- inner loop in root trace at Benchmark.som:46:11]
[TRACE --- BenchmarkHarness.som:138:31 -- inner loop in root trace at Benchmark.som:46:11]
[TRACE --- Benchmark.som:46:33 -- NYI: bytecode 48 at Benchmark.som:51:5]
[TRACE --- "SomPrimitives":360 -- leaving loop in root trace at BenchmarkHarness.som:143:33]
[TRACE 15 ":/Smalltalk/Integer.som":52:5 return]
[TRACE --- "SomPrimitives":364 -- NYI: FastFunc collectgarbage at "SomPrimitives":365]
[TRACE --- ":/Smalltalk/Object.som":52:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- ":/Smalltalk/Integer.som":51:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- ":/Smalltalk/Integer.som":64:5 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE 16 "SomPrimitives":591 return]
[TRACE --- ":/Smalltalk/Integer.som":68:5 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE --- Dispatch.som:28:5 -- NYI: bytecode 49 at Dispatch.som:31:25]
[TRACE 17 Dispatch.som:37:5 return]
```

Benchmark: Dispatch

Iterations: 100 (elapsed time 2152 ms)

AVERAGE: 22 ms

Starting Bounce benchmark ... warmup ...

```
[TRACE 18 "SomPrimitives":386 return]
[TRACE 19 Random.som:63:5 return]
[TRACE --- "SomPrimitives":418 -- leaving loop in root trace at Random.som:35:41]
[TRACE 20 "SomPrimitives":604 return]
[TRACE 21 "://Smalltalk/Array.som":0:0 return]
[TRACE --- Bounce.som:0:0 -- NYI: bytecode 49 at Bounce.som:38:23]
[TRACE --- "://Smalltalk/Array.som":0:0 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- (8/0) "SomPrimitives":578 -- NYI: bytecode 48 at "://Smalltalk/Integer.som":51:67]
[TRACE --- (8/0) "SomPrimitives":578 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- (8/0) "SomPrimitives":578 -- NYI: bytecode 48 at "://Smalltalk/Integer.som":51:67]
[TRACE --- (8/0) "SomPrimitives":578 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE 22 (8/0) "SomPrimitives":578 -- fallback to interpreter]
[TRACE 23 "://Smalltalk/Object.som":48:5 return]
[TRACE --- (9/1) "SomPrimitives":454 -- NYI: bytecode 48 at "://Smalltalk/Integer.som":51:67]
[TRACE 24 "SomPrimitives":280 return]
[TRACE --- (15/1) "SomPrimitives":459 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- (16/0) "SomPrimitives":592 -- NYI: bytecode 48 at "://Smalltalk/Integer.som":51:67]
[TRACE --- "://Smalltalk/Integer.som":51:5 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- (15/1) "SomPrimitives":459 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- (16/0) "SomPrimitives":592 -- NYI: bytecode 48 at "://Smalltalk/Integer.som":51:67]
[TRACE --- (15/1) "SomPrimitives":459 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- (16/0) "SomPrimitives":592 -- NYI: bytecode 48 at "://Smalltalk/Integer.som":51:67]
[TRACE --- (15/1) "SomPrimitives":459 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- (16/0) "SomPrimitives":592 -- NYI: bytecode 48 at "://Smalltalk/Integer.som":51:67]
[TRACE 25 (15/1) "SomPrimitives":459 -- fallback to interpreter]
[TRACE 26 (16/0) "SomPrimitives":592 -- fallback to interpreter]
[TRACE --- (9/1) "SomPrimitives":454 -- NYI: bytecode 48 at "://Smalltalk/Integer.som":51:67]
[TRACE --- (20/0) "SomPrimitives":605 -- NYI: bytecode 48 at "://Smalltalk/Integer.som":51:67]
[TRACE --- (20/0) "SomPrimitives":605 -- NYI: bytecode 48 at "://Smalltalk/Integer.som":51:67]
[TRACE --- (20/0) "SomPrimitives":605 -- NYI: bytecode 48 at "://Smalltalk/Integer.som":51:67]
[TRACE --- (20/0) "SomPrimitives":605 -- NYI: bytecode 48 at "://Smalltalk/Integer.som":51:67]
[TRACE --- Ball.som:30:5 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE 27 (20/0) "SomPrimitives":605 -- fallback to interpreter]
[TRACE --- (9/1) "SomPrimitives":454 -- NYI: bytecode 48 at "://Smalltalk/Integer.som":51:67]
[TRACE --- (9/1) "SomPrimitives":454 -- NYI: bytecode 48 at "://Smalltalk/Integer.som":51:67]
[TRACE --- "://Smalltalk/Array.som":0:0 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE 28 (9/1) "SomPrimitives":454 -- fallback to interpreter]
[TRACE --- Bounce.som:0:0 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- Ball.som:30:5 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- "://Smalltalk/Array.som":0:0 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- "://Smalltalk/Integer.som":51:5 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- Bounce.som:0:0 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- "://Smalltalk/Array.som":0:0 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- "://Smalltalk/Array.som":0:0 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE 29 "://Smalltalk/Integer.som":0:0 return]
[TRACE --- "://Smalltalk/Boolean.som":29:5 -- NYI: bytecode 48 at "://Smalltalk/Boolean.som":32:5]
[TRACE --- Ball.som:30:5 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- Bounce.som:0:0 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- "://Smalltalk/Array.som":0:0 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- "://Smalltalk/Array.som":41:5 -- NYI: bytecode 49 at "://Smalltalk/Array.som":41:52]
[TRACE --- "://Smalltalk/Array.som":0:0 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- "://Smalltalk/Integer.som":51:5 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
[TRACE --- "://Smalltalk/Boolean.som":29:5 -- NYI: bytecode 48 at "://Smalltalk/Boolean.som":32:5]
[TRACE --- Ball.som:30:5 -- NYI: bytecode 49 at "://Smalltalk/Integer.som":51:46]
```

```
[TRACE --- Bounce.som:0:0 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- ":/Smalltalk/Array.som":0:0 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- ":/Smalltalk/Array.som":0:0 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- ":/Smalltalk/Boolean.som":29:5 -- NYI: bytecode 48 at ":/Smalltalk/Boolean.som":32:5]
[TRACE --- ":/Smalltalk/Integer.som":51:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- Ball.som:30:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- Bounce.som:0:0 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- ":/Smalltalk/Array.som":0:0 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- ":/Smalltalk/Array.som":0:0 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- ":/Smalltalk/Boolean.som":29:5 -- NYI: bytecode 48 at ":/Smalltalk/Boolean.som":32:5]
[TRACE --- ":/Smalltalk/Integer.som":51:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- Ball.som:30:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- Bounce.som:0:0 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- ":/Smalltalk/Array.som":0:0 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- (29/1) "SomPrimitives":454 -- NYI: bytecode 48 at ":/Smalltalk/Integer.som":51:67]
[TRACE --- (29/1) "SomPrimitives":454 -- NYI: bytecode 48 at ":/Smalltalk/Integer.som":51:67]
[TRACE --- ":/Smalltalk/Array.som":0:0 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- (29/1) "SomPrimitives":454 -- NYI: bytecode 48 at ":/Smalltalk/Integer.som":51:67]
[TRACE --- (29/1) "SomPrimitives":454 -- NYI: bytecode 48 at ":/Smalltalk/Integer.som":51:67]
[TRACE 30 (29/1) "SomPrimitives":454 -- fallback to interpreter]
[TRACE --- ":/Smalltalk/Boolean.som":29:5 -- NYI: bytecode 48 at ":/Smalltalk/Boolean.som":32:5]
[TRACE 31 "SomPrimitives":401 return]
[TRACE 32 Random.som:34:5 return]
[TRACE 33 Random.som:60:5 return]
[TRACE 34 "SomPrimitives":65 return]
[TRACE --- (21/0) ":/Smalltalk/Array.som":33:33 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE --- (21/0) ":/Smalltalk/Array.som":33:33 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE --- (21/0) ":/Smalltalk/Array.som":33:33 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE --- (21/0) ":/Smalltalk/Array.som":33:33 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE 35 (21/0) ":/Smalltalk/Array.som":33:33 -- fallback to interpreter]
[TRACE 36 "SomPrimitives":172 return]
[TRACE 37 Ball.som:57:5 return]
[TRACE --- Ball.som:30:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- Bounce.som:0:0 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- ":/Smalltalk/Array.som":0:0 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- ":/Smalltalk/Integer.som":51:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- ":/Smalltalk/Array.som":0:0 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- ":/Smalltalk/Boolean.som":29:5 -- NYI: bytecode 48 at ":/Smalltalk/Boolean.som":32:5]
[TRACE 38 "SomPrimitives":291 return]
[TRACE 39 "SomPrimitives":285 return]
[TRACE 40 Bounce.som:0:0 return]
[TRACE --- Ball.som:30:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- Bounce.som:0:0 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- ":/Smalltalk/Array.som":0:0 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- ":/Smalltalk/Integer.som":64:5 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE --- ":/Smalltalk/Integer.som":51:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- ":/Smalltalk/Integer.som":68:5 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE --- (39/0) "SomPrimitives":286 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE --- (39/0) "SomPrimitives":286 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE --- (39/0) "SomPrimitives":286 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE --- (39/0) "SomPrimitives":286 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE 41 (39/0) "SomPrimitives":286 -- fallback to interpreter]
[TRACE --- ":/Smalltalk/Array.som":0:0 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
[TRACE --- Bounce.som:0:0 -- NYI: bytecode 49 at Bounce.som:38:23]
[TRACE --- ":/Smalltalk/Boolean.som":29:5 -- NYI: bytecode 48 at ":/Smalltalk/Boolean.som":32:5]
[TRACE --- ":/Smalltalk/Array.som":41:5 -- NYI: bytecode 49 at ":/Smalltalk/Array.som":41:52]
[TRACE --- Ball.som:30:5 -- NYI: bytecode 49 at ":/Smalltalk/Integer.som":51:46]
```



```
[TRACE --- Bounce.som:0:0 -- NYI: bytecode 49 at Bounce.som:38:23]
[TRACE --- Bounce.som:44:5 -- NYI: bytecode 48 at Benchmark.som:62:5]
[TRACE --- BenchmarkHarness.som:138:31 -- inner loop in root trace at Benchmark.som:46:11]
[TRACE --- ":/Smalltalk/Integer.som":64:5 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE --- ":/Smalltalk/Array.som":32:5 -- NYI: bytecode 49 at ":/Smalltalk/Array.som":32:46]
```

Benchmark: Bounce
Iterations: 100 (elapsed time 2331 ms)
AVERAGE: 23 ms

Starting Loop benchmark ... warmup ...

```
[TRACE 43 Loop.som:0:0 return]
[TRACE --- Loop.som:0:0 -- NYI: bytecode 49 at Loop.som:31:23]
[TRACE --- Loop.som:0:0 -- NYI: bytecode 49 at Loop.som:31:23]
[TRACE --- Benchmark.som:46:33 -- NYI: bytecode 48 at Benchmark.som:51:5]
[TRACE --- Loop.som:0:0 -- NYI: bytecode 49 at Loop.som:31:23]
[TRACE --- Loop.som:28:5 -- NYI: bytecode 49 at Loop.som:31:23]
[TRACE --- Benchmark.som:43:5 -- inner loop in root trace at Benchmark.som:46:11]
[TRACE --- Loop.som:28:5 -- NYI: bytecode 49 at Loop.som:31:23]
[TRACE --- Loop.som:0:0 -- NYI: bytecode 49 at Loop.som:31:23]
[TRACE --- Loop.som:28:5 -- NYI: bytecode 49 at Loop.som:31:23]
[TRACE --- Loop.som:28:5 -- NYI: bytecode 49 at Loop.som:31:23]
[TRACE --- Loop.som:28:5 -- NYI: bytecode 49 at Loop.som:31:23]
[TRACE --- Loop.som:0:0 -- NYI: bytecode 49 at Loop.som:31:23]
[TRACE --- Loop.som:28:5 -- NYI: bytecode 49 at Loop.som:31:23]
completed.
[TRACE --- Loop.som:0:0 -- NYI: bytecode 49 at Loop.som:31:23]
[TRACE --- Loop.som:28:5 -- NYI: bytecode 49 at Loop.som:31:23]
[TRACE --- ":/Smalltalk/Integer.som":68:5 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE --- ":/Smalltalk/Integer.som":64:5 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE --- Loop.som:0:0 -- NYI: bytecode 49 at Loop.som:31:23]
[TRACE --- Loop.som:28:5 -- NYI: bytecode 49 at Loop.som:31:23]
[TRACE 44 Loop.som:45:5 return]
[TRACE --- ":/Smalltalk/Object.som":52:5 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- Loop.som:28:5 -- NYI: bytecode 49 at Loop.som:31:23]
[TRACE --- Loop.som:0:0 -- NYI: bytecode 49 at Loop.som:31:23]
[TRACE --- ":/Smalltalk/Integer.som":68:5 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE --- "SomPrimitives":364 -- NYI: FastFunc collectgarbage at "SomPrimitives":365]
[TRACE --- ":/Smalltalk/Integer.som":64:5 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE --- Loop.som:28:5 -- NYI: bytecode 49 at Loop.som:31:23]
[TRACE --- Loop.som:0:0 -- NYI: bytecode 49 at Loop.som:31:23]
```

Benchmark: Loop
Iterations: 100 (elapsed time 2331 ms)
AVERAGE: 23 ms

Starting Permute benchmark ... warmup ...

```
[TRACE --- (24/0) "SomPrimitives":281 -- NYI: bytecode 48 at ":/Smalltalk/Integer.som":82:5]
[TRACE --- (24/0) "SomPrimitives":281 -- NYI: bytecode 48 at Permute.som:50:5]
[TRACE --- (24/0) "SomPrimitives":281 -- NYI: bytecode 48 at Permute.som:50:5]
[TRACE --- (24/0) "SomPrimitives":281 -- NYI: bytecode 48 at ":/Smalltalk/Integer.som":82:5]
[TRACE 45 (24/0) "SomPrimitives":281 -- fallback to interpreter]
[TRACE --- ":/Smalltalk/Integer.som":81:24 -- NYI: bytecode 48 at ":/Smalltalk/Integer.som":82:5]
[TRACE 46 Permute.som:52:5 return]
[TRACE --- ":/Smalltalk/Integer.som":81:24 -- NYI: bytecode 48 at Permute.som:50:5]
```



```
[TRACE --- Permuted.som:41:5 -- NYI: bytecode 48 at Permuted.som:50:5]
completed.
[TRACE --- "://Smalltalk/Integer.som":78:5 -- blacklisted at "://Smalltalk/Integer.som":81:24]
[TRACE --- "://Smalltalk/Integer.som":74:5 -- blacklisted at "://Smalltalk/Integer.som":81:24]
[TRACE --- Permuted.som:0:0 -- blacklisted at Permuted.som:41:5]
[TRACE --- Permuted.som:0:0 -- blacklisted at Permuted.som:41:5]
[TRACE --- "://Smalltalk/Integer.som":78:5 -- blacklisted at "://Smalltalk/Integer.som":81:24]
[TRACE --- "://Smalltalk/Integer.som":74:5 -- blacklisted at "://Smalltalk/Integer.som":78:5]
[TRACE 50 "SomPrimitives":295 return]
[TRACE --- Permuted.som:30:5 -- blacklisted at Permuted.som:41:5]
```

Benchmark: Permuted
Iterations: 100 (elapsed time 2068 ms)
AVERAGE: 21 ms

Starting Queens benchmark ... warmup ...

```
[TRACE 51 "SomPrimitives":168 return]
[TRACE --- "://Smalltalk/Array.som":133:5 -- NYI: bytecode 49 at "://Smalltalk/Array.som":32:46]
[TRACE --- (23/0) "://Smalltalk/Object.som":48:20 -- blacklisted at "://Smalltalk/Integer.som":71:24]
[TRACE --- (23/0) "://Smalltalk/Object.som":48:20 -- blacklisted at "://Smalltalk/Integer.som":71:24]
[TRACE --- (23/0) "://Smalltalk/Object.som":48:20 -- blacklisted at "://Smalltalk/Integer.som":71:24]
[TRACE --- (23/0) "://Smalltalk/Object.som":48:20 -- blacklisted at "://Smalltalk/Integer.som":71:24]
[TRACE 52 (23/0) "://Smalltalk/Object.som":48:20 -- fallback to interpreter]
[TRACE 53 "://Smalltalk/Boolean.som":36:5 return]
[TRACE --- (53/0) "://Smalltalk/Boolean.som":36:21 -- NYI: bytecode 49 at Queens.som:50:21]
[TRACE --- (53/0) "://Smalltalk/Boolean.som":36:21 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE --- (53/0) "://Smalltalk/Boolean.som":36:21 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE --- (53/0) "://Smalltalk/Boolean.som":36:21 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE 54 (53/0) "://Smalltalk/Boolean.som":36:21 -- fallback to interpreter]
[TRACE --- Queens.som:0:0 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE --- Queens.som:0:0 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE --- Queens.som:0:0 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE --- Queens.som:49:5 -- NYI: bytecode 49 at Queens.som:50:21]
[TRACE --- Queens.som:0:0 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE 55 Queens.som:65:5 return]
[TRACE --- Queens.som:49:5 -- NYI: bytecode 49 at Queens.som:50:21]
[TRACE --- (55/0) Queens.som:66:9 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE --- (55/0) Queens.som:66:9 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE --- (55/0) Queens.som:66:9 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE --- (55/0) Queens.som:66:9 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE 56 (55/0) Queens.som:66:9 -- fallback to interpreter]
[TRACE --- Queens.som:0:0 -- NYI: bytecode 49 at Queens.som:50:21]
[TRACE --- Queens.som:49:5 -- NYI: bytecode 49 at Queens.som:50:21]
[TRACE --- Queens.som:0:0 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE --- Queens.som:49:5 -- NYI: bytecode 49 at Queens.som:50:21]
[TRACE --- Queens.som:0:0 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE 57 Queens.som:61:5 return]
[TRACE --- (57/0) Queens.som:62:11 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE --- (57/0) Queens.som:62:11 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE --- (57/0) Queens.som:62:11 -- NYI: bytecode 49 at Queens.som:50:21]
[TRACE --- (57/0) Queens.som:62:11 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE 58 (57/0) Queens.som:62:11 -- fallback to interpreter]
[TRACE --- Queens.som:49:5 -- NYI: bytecode 49 at Queens.som:50:21]
[TRACE --- "://Smalltalk/Integer.som":68:5 -- blacklisted at "://Smalltalk/Integer.som":71:24]
[TRACE --- Queens.som:0:0 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE --- "://Smalltalk/Array.som":133:5 -- NYI: bytecode 49 at "://Smalltalk/Array.som":32:46]
```



```
[TRACE --- Queens.som:49:5 -- NYI: bytecode 49 at Queens.som:50:21]
[TRACE --- Queens.som:0:0 -- NYI: bytecode 49 at Queens.som:50:21]
[TRACE --- ":/Smalltalk/Array.som":32:5 -- NYI: bytecode 49 at ":/Smalltalk/Array.som":32:46]
[TRACE --- Queens.som:49:5 -- NYI: bytecode 49 at Queens.som:50:21]
[TRACE --- Queens.som:0:0 -- NYI: bytecode 48 at Queens.som:57:55]
[TRACE --- ":/Smalltalk/Array.som":32:5 -- NYI: bytecode 49 at ":/Smalltalk/Array.som":32:46]
[TRACE --- Queens.som:49:5 -- NYI: bytecode 49 at Queens.som:50:21]
[TRACE --- Benchmark.som:43:5 -- inner loop in root trace at Benchmark.som:46:11]
[TRACE --- Queens.som:0:0 -- NYI: bytecode 48 at Queens.som:57:55]
completed.
[TRACE --- Queens.som:41:5 -- NYI: bytecode 49 at ":/Smalltalk/Array.som":32:46]
[TRACE --- ":/Smalltalk/Integer.som":64:5 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE --- ":/Smalltalk/Array.som":32:5 -- NYI: bytecode 49 at ":/Smalltalk/Array.som":32:46]
[TRACE --- Queens.som:49:5 -- NYI: bytecode 49 at Queens.som:50:21]
[TRACE --- Queens.som:41:5 -- NYI: bytecode 49 at ":/Smalltalk/Array.som":32:46]
[TRACE --- "SomPrimitives":360 -- leaving loop in root trace at BenchmarkHarness.som:143:33]
[TRACE --- ":/Smalltalk/Array.som":32:5 -- NYI: bytecode 49 at ":/Smalltalk/Array.som":32:46]
[TRACE --- ":/Smalltalk/Integer.som":68:5 -- blacklisted at ":/Smalltalk/Integer.som":71:24]
[TRACE --- Queens.som:49:5 -- NYI: bytecode 49 at Queens.som:50:21]
[TRACE --- Queens.som:41:5 -- NYI: bytecode 49 at ":/Smalltalk/Array.som":32:46]
[TRACE --- ":/Smalltalk/Integer.som":64:5 -- blacklisted at ":/Smalltalk/Integer.som":68:5]
[TRACE --- ":/Smalltalk/Array.som":32:5 -- NYI: bytecode 49 at ":/Smalltalk/Array.som":32:46]
[TRACE --- Queens.som:41:5 -- NYI: bytecode 49 at ":/Smalltalk/Array.som":32:46]
[TRACE --- ":/Smalltalk/Object.som":52:5 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- Queens.som:49:5 -- NYI: bytecode 49 at Queens.som:50:21]
[TRACE --- BenchmarkHarness.som:138:31 -- inner loop in root trace at Benchmark.som:46:11]
[TRACE --- ":/Smalltalk/Array.som":133:5 -- NYI: bytecode 49 at ":/Smalltalk/Array.som":32:46]
[TRACE --- ":/Smalltalk/Array.som":133:5 -- NYI: bytecode 49 at ":/Smalltalk/Array.som":32:46]
[TRACE --- ":/Smalltalk/Array.som":133:5 -- NYI: bytecode 49 at ":/Smalltalk/Array.som":32:46]
[TRACE --- ":/Smalltalk/Array.som":41:5 -- NYI: bytecode 49 at ":/Smalltalk/Array.som":41:52]
[TRACE 59 Queens.som:37:5 return]
```

Benchmark: Queens

Iterations: 100 (elapsed time 2637 ms)

AVERAGE: 26 ms

Starting List benchmark ... warmup ...

```
[TRACE 60 ":/Smalltalk/Object.som":39:5 return]
[TRACE 61 List.som:53:13 loop]
[TRACE 62 ":/Smalltalk/Nil.som":32:5 return]
[TRACE 63 (61/1) List.som:52:11 -> 61]
[TRACE --- (61/0) List.som:52:11 -- NYI: bytecode 48 at List.som:59:5]
[TRACE --- (61/0) List.som:52:11 -- NYI: bytecode 48 at List.som:59:5]
[TRACE --- (61/0) List.som:52:11 -- NYI: bytecode 48 at List.som:59:5]
[TRACE --- (61/0) List.som:52:11 -- NYI: bytecode 48 at List.som:59:5]
[TRACE 64 (61/0) List.som:52:11 -- fallback to interpreter]
[TRACE 65 (63/0) List.som:52:11 -> 61]
[TRACE 66 ListElement.som:35:5 return]
[TRACE 67 (65/0) List.som:52:11 -> 61]
[TRACE --- List.som:48:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- List.som:48:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- List.som:48:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- List.som:48:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- List.som:48:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- List.som:48:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- List.som:48:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- List.som:61:5 -- inner loop in root trace at List.som:52:11]
```

```
[TRACE --- List.som:61:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- List.som:61:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- List.som:61:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- List.som:48:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- List.som:61:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- Benchmark.som:46:33 -- call unroll limit reached at List.som:40:5]
[TRACE 68 ListElement.som:40:5 return]
[TRACE --- List.som:61:5 -- inner loop in root trace at List.som:52:11]
[TRACE 69 List.som:40:5 up-recursion]
[TRACE 70 ListElement.som:36:5 return]
[TRACE --- List.som:61:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- List.som:48:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- List.som:61:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- (70/0) ListElement.som:36:31 -- NYI: bytecode 48 at List.som:46:5]
[TRACE --- (70/0) ListElement.som:36:31 -- NYI: bytecode 48 at List.som:46:5]
[TRACE --- (70/0) ListElement.som:36:31 -- NYI: bytecode 48 at List.som:46:5]
[TRACE --- (69/1) "SomPrimitives":454 -- NYI: bytecode 48 at List.som:46:5]
[TRACE --- (70/0) ListElement.som:36:31 -- NYI: bytecode 48 at List.som:46:5]
[TRACE --- List.som:48:5 -- inner loop in root trace at List.som:52:11]
[TRACE 71 (70/0) ListElement.som:36:31 -- fallback to interpreter]
[TRACE --- (69/1) "SomPrimitives":454 -- NYI: bytecode 48 at List.som:46:5]
[TRACE --- (69/1) "SomPrimitives":454 -- NYI: bytecode 48 at List.som:46:5]
[TRACE --- List.som:61:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- (69/1) "SomPrimitives":454 -- NYI: bytecode 48 at List.som:46:5]
[TRACE 72 (69/1) "SomPrimitives":454 -- fallback to interpreter]
completed.
[TRACE --- (69/5) "SomPrimitives":454 -- NYI: bytecode 48 at List.som:46:5]
[TRACE --- (69/5) "SomPrimitives":454 -- NYI: bytecode 48 at List.som:46:5]
[TRACE --- (69/5) "SomPrimitives":454 -- NYI: bytecode 48 at List.som:46:5]
[TRACE --- List.som:48:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- (69/5) "SomPrimitives":454 -- NYI: bytecode 48 at List.som:46:5]
[TRACE --- List.som:61:5 -- inner loop in root trace at List.som:52:11]
[TRACE 73 (69/5) "SomPrimitives":454 -- fallback to interpreter]
[TRACE 74 List.som:28:5 -> 69]
[TRACE --- List.som:48:5 -- inner loop in root trace at List.som:52:11]
[TRACE --- List.som:61:5 -- blacklisted at List.som:48:5]
[TRACE --- "SomPrimitives":364 -- NYI: FastFunc collectgarbage at "SomPrimitives":365]
[TRACE 75 ListElement.som:30:5 up-recursion]
[TRACE --- (75/0) ListElement.som:30:16 -- down-recursion, restarting at ListElement.som:30:53]
[TRACE 76 ListElement.som:30:53 down-recursion]
[TRACE 77 (75/0) ListElement.som:30:16 ->76]
[TRACE --- (76/5) ListElement.som:30:53 -- NYI: bytecode 48 at Benchmark.som:62:5]
[TRACE --- (76/5) ListElement.som:30:53 -- NYI: bytecode 48 at Benchmark.som:62:5]
[TRACE --- (76/5) ListElement.som:30:53 -- NYI: bytecode 48 at Benchmark.som:62:5]
[TRACE --- (76/5) ListElement.som:30:53 -- NYI: bytecode 48 at Benchmark.som:62:5]
[TRACE 78 (76/5) ListElement.som:30:53 -- fallback to interpreter]
```

Benchmark: List
Iterations: 100 (elapsed time 199 ms)
AVERAGE: 2 ms

Starting Recurse benchmark ... warmup ...

```
[TRACE --- "://Smalltalk/String.som":97:5 -- NYI: C function C:80a0dd0 at "SomPrimitives":346]
[TRACE --- Recurse.som:32:5 -- blacklisted at "://Smalltalk/Integer.som":51:5]
[TRACE --- Recurse.som:32:5 -- blacklisted at "://Smalltalk/Integer.som":51:5]
[TRACE --- Recurse.som:32:5 -- blacklisted at "://Smalltalk/Integer.som":51:5]
```


Benchmark: Storage
Iterations: 100 (elapsed time 2156 ms)
AVERAGE: 22 ms

Starting Sieve benchmark ... warmup ...

```
[TRACE 80 ":/Smalltalk/String.som":34:5 return]
[TRACE --- Sieve.som:49:25 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- Sieve.som:49:25 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- Sieve.som:49:25 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- Sieve.som:49:25 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- Sieve.som:49:25 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- Sieve.som:49:25 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- Sieve.som:49:25 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- Sieve.som:0:0 -- NYI: bytecode 48 at Sieve.som:50:73]
[TRACE --- Sieve.som:0:0 -- NYI: bytecode 48 at Sieve.som:50:73]
[TRACE --- Sieve.som:49:25 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- Sieve.som:0:0 -- NYI: bytecode 48 at Sieve.som:50:73]
[TRACE --- Sieve.som:0:0 -- NYI: bytecode 48 at Sieve.som:50:73]
[TRACE --- Sieve.som:0:0 -- inner loop in root trace at Sieve.som:48:23]
[TRACE --- Sieve.som:0:0 -- NYI: bytecode 48 at Sieve.som:50:73]
[TRACE --- Sieve.som:49:25 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- Sieve.som:0:0 -- NYI: bytecode 48 at Sieve.som:50:73]
[TRACE --- Sieve.som:0:0 -- NYI: bytecode 48 at Sieve.som:50:73]
[TRACE --- Benchmark.som:57:5 -- NYI: bytecode 48 at Benchmark.som:62:5]
[TRACE --- Sieve.som:49:25 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- Sieve.som:0:0 -- NYI: bytecode 48 at Sieve.som:50:73]
[TRACE --- Sieve.som:0:0 -- NYI: bytecode 48 at Sieve.som:50:73]
completed.
[TRACE --- Sieve.som:0:0 -- NYI: bytecode 48 at Sieve.som:50:73]
[TRACE --- Sieve.som:38:5 -- blacklisted at ":/Smalltalk/Array.som":32:5]
[TRACE --- Sieve.som:28:5 -- blacklisted at ":/Smalltalk/Array.som":32:5]
```

Benchmark: Sieve
Iterations: 100 (elapsed time 2937 ms)
AVERAGE: 29 ms

Starting BubbleSort benchmark ... warmup ...

```
[TRACE --- (5/0) "SomPrimitives":377 -- NYI: C function C:80a0dd0 at "SomPrimitives":346]
[TRACE 81 Sort.som:0:0 return]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- BubbleSort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- BubbleSort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- BubbleSort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- BubbleSort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- BubbleSort.som:0:0 -- NYI: bytecode 49 at BubbleSort.som:30:29]
[TRACE --- BubbleSort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- BubbleSort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- BubbleSort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- BubbleSort.som:0:0 -- NYI: bytecode 49 at BubbleSort.som:30:29]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- BubbleSort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- BubbleSort.som:0:0 -- NYI: bytecode 49 at BubbleSort.som:30:29]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
```

```
[TRACE --- BubbleSort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- BubbleSort.som:0:0 -- NYI: bytecode 49 at BubbleSort.som:30:29]
[TRACE --- BubbleSort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- BubbleSort.som:0:0 -- NYI: bytecode 49 at BubbleSort.som:30:29]
[TRACE --- Sort.som:39:5 -- NYI: bytecode 49 at Sort.som:43:34]
[TRACE --- BubbleSort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
completed.
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- BubbleSort.som:0:0 -- NYI: bytecode 49 at BubbleSort.som:30:29]
[TRACE --- Sort.som:49:5 -- NYI: bytecode 49 at Sort.som:52:43]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- BubbleSort.som:0:0 -- NYI: bytecode 49 at BubbleSort.som:30:29]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- BubbleSort.som:0:0 -- NYI: bytecode 49 at BubbleSort.som:30:29]
[TRACE --- "SomPrimitives":360 -- leaving loop in root trace at BenchmarkHarness.som:143:33]
[TRACE --- Sort.som:39:5 -- NYI: bytecode 49 at Sort.som:43:34]
[TRACE --- BubbleSort.som:0:0 -- NYI: bytecode 49 at BubbleSort.som:30:29]
[TRACE --- Sort.som:30:5 -- NYI: bytecode 49 at Sort.som:52:43]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- BubbleSort.som:28:5 -- NYI: bytecode 49 at BubbleSort.som:29:36]
[TRACE --- Sort.som:49:5 -- NYI: bytecode 49 at Sort.som:52:43]
[TRACE 82 BubbleSort.som:41:5 return]
```

Benchmark: BubbleSort

Iterations: 100 (elapsed time 2587 ms)

AVERAGE: 26 ms

Starting QuickSort benchmark ... warmup ...

```
[TRACE --- (5/0) "SomPrimitives":377 -- NYI: C function C:80a0dd0 at "SomPrimitives":346]
[TRACE 83 QuickSort.som:41:43 loop]
[TRACE --- (83/4) "SomPrimitives":459 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- (83/4) "SomPrimitives":459 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- (83/4) "SomPrimitives":459 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- (83/4) "SomPrimitives":459 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE 84 (83/4) "SomPrimitives":459 -- fallback to interpreter]
[TRACE --- (83/1) "SomPrimitives":459 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- (83/1) "SomPrimitives":459 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:42:43 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- (83/1) "SomPrimitives":459 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:40:13 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- (83/1) "SomPrimitives":459 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE 85 (83/1) "SomPrimitives":459 -- fallback to interpreter]
[TRACE --- QuickSort.som:42:43 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:40:13 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:42:43 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:40:13 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:42:43 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:40:13 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:42:43 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:40:13 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:42:43 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:40:13 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:42:43 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:33:5 -- inner loop in root trace at QuickSort.som:39:11]
```

```
[TRACE --- QuickSort.som:33:5 -- inner loop in root trace at QuickSort.som:39:11]
[TRACE --- QuickSort.som:40:13 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE 86 QuickSort.som:42:43 loop]
[TRACE --- (86/4) "SomPrimitives":459 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- (86/1) "SomPrimitives":459 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- (86/1) "SomPrimitives":459 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- (86/1) "SomPrimitives":459 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- (86/1) "SomPrimitives":459 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE 87 (86/1) "SomPrimitives":459 -- fallback to interpreter]
[TRACE --- (86/4) "SomPrimitives":459 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- (86/4) "SomPrimitives":459 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- (86/4) "SomPrimitives":459 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE 88 (86/4) "SomPrimitives":459 -- fallback to interpreter]
[TRACE --- QuickSort.som:33:5 -- inner loop in root trace at QuickSort.som:39:11]
[TRACE --- QuickSort.som:40:13 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:33:5 -- inner loop in root trace at QuickSort.som:39:11]
[TRACE --- QuickSort.som:40:13 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:33:5 -- inner loop in root trace at QuickSort.som:39:11]
[TRACE --- QuickSort.som:40:13 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:33:5 -- inner loop in root trace at QuickSort.som:39:11]
[TRACE --- "SomPrimitives":391 -- leaving loop in root trace at QuickSort.som:36:41]
[TRACE --- "SomPrimitives":391 -- leaving loop in root trace at QuickSort.som:36:41]
[TRACE --- "SomPrimitives":391 -- leaving loop in root trace at QuickSort.som:36:41]
[TRACE --- "SomPrimitives":391 -- leaving loop in root trace at QuickSort.som:36:41]
[TRACE 89 ":/Smalltalk/Boolean.som":35:5 return]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- QuickSort.som:40:13 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:33:5 -- inner loop in root trace at QuickSort.som:39:11]
completed.
[TRACE --- QuickSort.som:40:13 -- blacklisted at ":/Smalltalk/Integer.som":53:5]
[TRACE --- QuickSort.som:33:5 -- blacklisted at QuickSort.som:40:13]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- "SomPrimitives":391 -- leaving loop in root trace at QuickSort.som:36:41]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE 90 QuickSort.som:56:5 return]
[TRACE --- BenchmarkHarness.som:138:31 -- inner loop in root trace at Benchmark.som:46:11]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- QuickSort.som:33:5 -- blacklisted at QuickSort.som:40:13]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- Sort.som:30:5 -- NYI: bytecode 49 at Sort.som:52:43]
[TRACE --- "SomPrimitives":391 -- leaving loop in root trace at QuickSort.som:36:41]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- "SomPrimitives":391 -- leaving loop in root trace at QuickSort.som:36:41]
[TRACE --- QuickSort.som:33:5 -- blacklisted at QuickSort.som:40:13]
[TRACE --- "SomPrimitives":391 -- leaving loop in root trace at QuickSort.som:36:41]
[TRACE --- Sort.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- "SomPrimitives":391 -- leaving loop in root trace at QuickSort.som:36:41]
[TRACE --- BenchmarkHarness.som:0:0 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- "SomPrimitives":391 -- leaving loop in root trace at QuickSort.som:36:41]
```

Benchmark: QuickSort
Iterations: 100 (elapsed time 1236 ms)
AVERAGE: 12 ms

Starting Sum benchmark ... warmup ...

```
[TRACE 91 "SomPrimitives":58 return]
[TRACE --- (5/0) "SomPrimitives":377 -- NYI: C function C:80a0dd0 at "SomPrimitives":346]
[TRACE --- (36/0) "SomPrimitives":173 -- NYI: bytecode 36 at "SomPrimitives":225]
[TRACE 92 Sum.som:0:0 return]
[TRACE --- Benchmark.som:46:33 -- NYI: bytecode 49 at Sum.som:30:21]
completed.
[TRACE --- "SomPrimitives":364 -- NYI: FastFunc collectgarbage at "SomPrimitives":365]
[TRACE --- ":/Smalltalk/Object.som":52:5 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
[TRACE --- Sum.som:34:5 -- NYI: bytecode 49 at Sum.som:37:27]
[TRACE --- Sum.som:0:0 -- NYI: bytecode 49 at Sum.som:37:27]
[TRACE --- Sum.som:0:0 -- NYI: bytecode 49 at Sum.som:37:27]
[TRACE --- Sum.som:34:5 -- NYI: bytecode 49 at Sum.som:37:27]
```

Benchmark: Sum

Iterations: 100 (elapsed time 2141 ms)

AVERAGE: 21 ms

Starting Towers benchmark ... warmup ...

```
[TRACE --- (5/0) "SomPrimitives":377 -- NYI: C function C:80a0dd0 at "SomPrimitives":346]
[TRACE --- (36/0) "SomPrimitives":173 -- NYI: bytecode 36 at "SomPrimitives":225]
[TRACE 93 TowersDisk.som:30:5 return]
[TRACE --- Towers.som:32:5 -- NYI: bytecode 49 at Towers.som:36:28]
[TRACE 94 TowersDisk.som:33:5 return]
[TRACE --- (94/0) TowersDisk.som:33:29 -- NYI: bytecode 48 at Towers.som:41:5]
[TRACE --- (94/0) TowersDisk.som:33:29 -- NYI: bytecode 48 at Towers.som:41:5]
[TRACE --- (94/0) TowersDisk.som:33:29 -- NYI: bytecode 48 at Towers.som:41:5]
[TRACE --- (94/0) TowersDisk.som:33:29 -- NYI: bytecode 48 at Towers.som:41:5]
[TRACE 95 (94/0) TowersDisk.som:33:29 -- fallback to interpreter]
[TRACE 96 TowersDisk.som:32:5 return]
[TRACE --- Towers.som:43:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:32:5 -- NYI: bytecode 49 at Towers.som:36:28]
[TRACE --- Towers.som:56:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:66:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:43:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:56:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:66:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- (96/0) TowersDisk.som:32:22 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- (96/0) TowersDisk.som:32:22 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- (96/0) TowersDisk.som:32:22 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- (96/0) TowersDisk.som:32:22 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:32:5 -- NYI: bytecode 49 at Towers.som:36:28]
[TRACE 97 (96/0) TowersDisk.som:32:22 -- fallback to interpreter]
[TRACE --- Towers.som:43:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:66:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:56:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:32:5 -- NYI: bytecode 49 at Towers.som:36:28]
[TRACE --- Towers.som:43:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:66:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:56:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE 98 Towers.som:0:0 return]
[TRACE --- Towers.som:32:5 -- NYI: bytecode 49 at Towers.som:36:28]
[TRACE --- Towers.som:43:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:66:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:56:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:32:5 -- NYI: bytecode 49 at Towers.som:36:28]
```

```
[TRACE --- Towers.som:43:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:66:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:56:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:32:5 -- NYI: bytecode 49 at Towers.som:36:28]
[TRACE 99 Towers.som:66:5 up-recursion]
[TRACE --- Towers.som:43:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- (99/1) "SomPrimitives":454 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- (99/1) "SomPrimitives":454 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- (99/1) "SomPrimitives":454 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- (99/1) "SomPrimitives":454 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE 100 (99/1) "SomPrimitives":454 -- fallback to interpreter]
[TRACE --- (99/3) "SomPrimitives":454 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- (99/3) "SomPrimitives":454 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- (99/3) "SomPrimitives":454 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- (99/3) "SomPrimitives":454 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE 101 (99/3) "SomPrimitives":454 -- fallback to interpreter]
[TRACE --- (99/4) "SomPrimitives":454 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- (99/4) "SomPrimitives":454 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- (99/4) "SomPrimitives":454 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- (99/4) "SomPrimitives":454 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE 102 (99/4) "SomPrimitives":454 -- fallback to interpreter]
[TRACE --- Towers.som:56:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:32:5 -- NYI: bytecode 49 at Towers.som:36:28]
[TRACE --- Towers.som:43:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:56:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:43:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:32:5 -- NYI: bytecode 49 at Towers.som:36:28]
[TRACE --- Towers.som:56:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE 103 TowersDisk.som:31:5 return]
[TRACE --- Towers.som:43:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:32:5 -- NYI: bytecode 49 at Towers.som:36:28]
[TRACE --- Towers.som:56:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE 104 TowersDisk.som:37:5 return]
[TRACE --- Towers.som:43:5 -- NYI: bytecode 48 at Towers.som:54:5]
[TRACE --- Towers.som:32:5 -- NYI: bytecode 49 at Towers.som:36:28]
completed.
[TRACE --- Towers.som:56:5 -- blacklisted at Towers.som:43:5]
[TRACE --- Towers.som:0:0 -- blacklisted at Towers.som:32:5]
[TRACE --- Towers.som:0:0 -- blacklisted at Towers.som:32:5]
[TRACE --- Towers.som:0:0 -- blacklisted at Towers.som:32:5]
[TRACE --- Benchmark.som:57:5 -- NYI: bytecode 48 at Benchmark.som:62:5]
[TRACE --- Towers.som:0:0 -- blacklisted at Towers.som:32:5]
[TRACE --- Towers.som:0:0 -- blacklisted at Towers.som:32:5]
```

Benchmark: Towers
Iterations: 100 (elapsed time 2572 ms)
AVERAGE: 26 ms

Starting TreeSort benchmark ... warmup ...

```
[TRACE 105 "SomPrimitives":514 return]
[TRACE 106 (5/0) "SomPrimitives":377 -- fallback to interpreter]
[TRACE --- (36/0) "SomPrimitives":173 -- NYI: bytecode 36 at "SomPrimitives":225]
[TRACE --- TreeSort.som:0:0 -- NYI: bytecode 48 at TreeNode.som:48:5]
[TRACE --- TreeSort.som:0:0 -- call unroll limit reached at TreeNode.som:38:5]
[TRACE 107 TreeNode.som:52:5 return]
[TRACE --- TreeNode.som:38:5 -- NYI: bytecode 48 at TreeNode.som:48:5]
```



```
[TRACE 108 TreeNode.som:38:5 up-recursion]
[TRACE 109 (108/1) "SomPrimitives":459 -> 108]
[TRACE 110 (108/0) TreeNode.som:39:10 -> 108]
[TRACE 111 (108/2) "SomPrimitives":459 -> 108]
[TRACE --- (110/1) "SomPrimitives":459 -- NYI: bytecode 48 at TreeNode.som:48:5]
[TRACE --- (110/1) "SomPrimitives":459 -- NYI: bytecode 48 at TreeNode.som:48:5]
[TRACE --- (110/1) "SomPrimitives":459 -- NYI: bytecode 48 at TreeNode.som:48:5]
[TRACE 112 TreeSort.som:0:0 -> 108]
[TRACE --- (110/1) "SomPrimitives":459 -- NYI: bytecode 48 at TreeNode.som:48:5]
[TRACE 113 (108/3) "SomPrimitives":459 -> 108]
[TRACE 114 (110/1) "SomPrimitives":459 -- fallback to interpreter]
[TRACE --- (110/2) "SomPrimitives":459 -- NYI: bytecode 48 at TreeNode.som:48:5]
[TRACE --- (110/2) "SomPrimitives":459 -- NYI: bytecode 48 at TreeNode.som:48:5]
[TRACE --- (110/2) "SomPrimitives":459 -- NYI: bytecode 48 at TreeNode.som:48:5]
[TRACE 115 (110/2) "SomPrimitives":459 -> 108]
[TRACE 116 (108/5) "SomPrimitives":459 -> 108]
[TRACE --- (115/0) "SomPrimitives":459 -- NYI: bytecode 48 at TreeNode.som:48:5]
[TRACE --- (115/0) "SomPrimitives":459 -- NYI: bytecode 48 at TreeNode.som:48:5]
[TRACE 117 (108/4) "SomPrimitives":459 -> 108]
[TRACE --- (115/0) "SomPrimitives":459 -- NYI: bytecode 48 at TreeNode.som:48:5]
[TRACE --- (115/0) "SomPrimitives":459 -- NYI: bytecode 48 at TreeNode.som:48:5]
[TRACE 118 (115/0) "SomPrimitives":459 -- fallback to interpreter]
[TRACE 119 (113/0) "SomPrimitives":459 -> 108]
[TRACE 120 (108/6) "SomPrimitives":459 -> 108]
[TRACE --- (89/0) ":/Smalltalk/Boolean.som":35:21 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- (89/0) ":/Smalltalk/Boolean.som":35:21 -- NYI: bytecode 49 at TreeNode.som:35:26]
[TRACE --- (89/0) ":/Smalltalk/Boolean.som":35:21 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- (89/0) ":/Smalltalk/Boolean.som":35:21 -- NYI: bytecode 49 at TreeNode.som:35:26]
[TRACE 121 (89/0) ":/Smalltalk/Boolean.som":35:21 -- fallback to interpreter]
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:33:5 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE 122 TreeNode.som:30:5 return]
[TRACE --- TreeNode.som:33:5 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- (122/0) TreeNode.som:30:19 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- (122/0) TreeNode.som:30:19 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- (122/0) TreeNode.som:30:19 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- (122/0) TreeNode.som:30:19 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE 123 (122/0) TreeNode.som:30:19 -- fallback to interpreter]
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:33:5 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:33:5 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:33:5 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE 124 (112/2) "SomPrimitives":454 -> 108]
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:33:5 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- "SomPrimitives":364 -- NYI: FastFunc collectgarbage at "SomPrimitives":365]
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:33:5 -- NYI: bytecode 49 at TreeNode.som:34:26]
completed.
[TRACE --- (112/1) "SomPrimitives":454 -- NYI: bytecode 48 at TreeSort.som:33:57]
[TRACE --- TreeNode.som:33:5 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- (112/1) "SomPrimitives":454 -- NYI: bytecode 48 at TreeSort.som:33:57]
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
```

```
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- (112/1) "SomPrimitives":454 -- NYI: bytecode 48 at TreeSort.som:33:57]
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- (112/1) "SomPrimitives":454 -- NYI: bytecode 48 at TreeSort.som:33:57]
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE 125 (112/1) "SomPrimitives":454 -- fallback to interpreter]
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:33:5 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:33:5 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeSort.som:37:5 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:0:0 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- "SomPrimitives":360 -- leaving loop in root trace at BenchmarkHarness.som:140:33]
[TRACE --- "SomPrimitives":364 -- NYI: FastFunc collectgarbage at "SomPrimitives":365]
[TRACE --- TreeNode.som:33:5 -- NYI: bytecode 49 at TreeNode.som:34:26]
[TRACE --- TreeNode.som:0:0 -- blacklisted at TreeNode.som:33:5]
[TRACE --- Sort.som:49:5 -- NYI: bytecode 49 at Sort.som:52:43]
[TRACE --- "SomPrimitives":360 -- leaving loop in root trace at BenchmarkHarness.som:143:33]
[TRACE --- TreeNode.som:0:0 -- blacklisted at TreeNode.som:33:5]
[TRACE --- TreeSort.som:28:5 -- NYI: bytecode 49 at TreeSort.som:30:26]
[TRACE --- Sort.som:30:5 -- NYI: bytecode 49 at Sort.som:52:43]
```

Benchmark: TreeSort

Iterations: 100 (elapsed time 1053 ms)

AVERAGE: 11 ms

Starting IntegerLoop benchmark ... warmup ...

```
[TRACE --- (36/0) "SomPrimitives":173 -- NYI: bytecode 36 at "SomPrimitives":225]
[TRACE 126 IntegerLoop.som:0:0 return]
[TRACE 127 IntegerLoop.som:34:5 return]
completed.
[TRACE --- "SomPrimitives":364 -- NYI: FastFunc collectgarbage at "SomPrimitives":365]
[TRACE --- "SomPrimitives":360 -- leaving loop in root trace at BenchmarkHarness.som:140:33]
```

Benchmark: IntegerLoop

Iterations: 67 (elapsed time 3003 ms)

AVERAGE: 45 ms

Starting FieldLoop benchmark ... warmup ...

```
[TRACE 128 (36/0) "SomPrimitives":173 -- fallback to interpreter]
[TRACE --- (34/0) "SomPrimitives":66 -- NYI: bytecode 36 at "SomPrimitives":225]
[TRACE --- FieldLoop.som:30:22 -- blacklisted at "://Smalltalk/Integer.som":51:5]
[TRACE --- FieldLoop.som:30:22 -- blacklisted at "://Smalltalk/Integer.som":51:5]
[TRACE --- FieldLoop.som:30:22 -- blacklisted at "://Smalltalk/Integer.som":51:5]
[TRACE --- FieldLoop.som:30:22 -- blacklisted at "://Smalltalk/Integer.som":51:5]
[TRACE --- FieldLoop.som:30:22 -- blacklisted at "://Smalltalk/Integer.som":51:5]
[TRACE --- FieldLoop.som:30:22 -- blacklisted at "://Smalltalk/Integer.som":51:5]
[TRACE --- FieldLoop.som:30:22 -- blacklisted at "://Smalltalk/Integer.som":51:5]
[TRACE --- FieldLoop.som:30:22 -- blacklisted at "://Smalltalk/Integer.som":51:5]
[TRACE --- FieldLoop.som:30:22 -- blacklisted at "://Smalltalk/Integer.som":51:5]
[TRACE --- FieldLoop.som:30:22 -- blacklisted at "://Smalltalk/Integer.som":51:5]
[TRACE --- FieldLoop.som:30:22 -- blacklisted at "://Smalltalk/Integer.som":51:5]
```

[TRACE --- FieldLoop.som:30:22 -- blacklisted at ":/Smalltalk/Integer.som":51:5]
completed.

Benchmark: FieldLoop
Iterations: 38 (elapsed time 3015 ms)
AVERAGE: 79 ms

Summed Average Runtime: 79 ms