Creative Computing Benchmark

The Creative Computing benchmark is a short test of computational speed, accuracy, and the random number generator in Basic. Computers in the chart are listed in ascending order of completion time of the test expressed in minutes and seconds. In the accuracy measure, the smaller the number the better (.0000001 is excellent while .187805 is poor). In the randomness measure, smaller is better (numbers under 15 are good and over 15 are fair).

Since running the short article about the benchmark test, we have been overwhelmed with responses from readers who ran the test on machines not listed in our original table. With letters still pouring in, here are the results for 183 different computers.

We have taken note of the criticisms of this simple test and are in the process of devising a more comprehensive one. Watch for a follow-up article.—DHA END

```
10 ' Ahl's Simple Benchmark
20 FOR N=1 TO 100: A=N
30 FOR I=1 TO 10
40 A=SQR(A): R=R+RND(1)
50 NEXT I
60 FOR I=1 TO 10
70 A=A^2: R=R+RND(1)
80 NEXT I
90 S=S+A: NEXT N
100 PRINT ABS(1010-S/5)
110 PRINT ABS(1000-R)
```

Computer	Time	Accuracy	Random
Cray 1	0:00.01	.0000000014	6.1
Amdahl 470	0:00.04	.00000000011846	12.4
Harris H-1000	0:00.06	.000003810971975	0.9
IBM 370/67	0:00.08	.000000000345835	4.6
Control Data Cyber 855	0:00.09	.00000000354703	6.1
Harris H-800	0:00.14	.000004418194294	0.9
DEC System 10	0:00.18	.00494385	8.9
DEC VAX 11/780	0:00.28	.00113525	5.3
Burroughs B6810	0:00.82	.00000850856304	21.6
DEC VAX 11/780 (double)	0:01.5	.000000000163283	5.3
DEC PDP 11/44	0:01.8	.000000000160298	2.4
DEC PDP 11/70 (RSTS)	0:02	.000000000160298	15.8
IBM PC (Basic87)	0:02	.000000000000682	87.3
Prime 550	0:02	.000000072876	12.2
HP 9845B (390 bit slice)	0:03	.00000882	23.1
Control Data Cyber 730	0:03	.00000000354703	6.1
HP 3000/44, single pre.	0:04	.112549	6.0
HP 3000/44, double pre.	0:05	.0000000000271996	9.4
HP 9836	0:05	.000000000127329	5.5
Control Data 3500	0:05	.001302457	2.8
Wang 2200 SVP	0:05	.000000076	3.9
Alpha Micro AM 1000E	0:05	.000000936911	12.4
IBM PC (Compiled Basic)	0:06	.01159668	20.4
DEC PDP 11/44 (RSTS)	0:07	.000000000158025	11.5
IBM S/38, model 7	0:07	.000000000008185	4.6
Wang PC	0:07	.005859375	7.2
Tandy Model 2000	0:07	.005859375	7.2
Data General Eclipse	0:08	.000000000345835	1.1
Eagle 1600	0:08	.005859375	7.2
Stearns Micro	0:08	.005859375	7.1
Burroughs B20	0:09	.005938744544977	3.2
Symbolics 3600	0:09	.111328125	8.5
DEC PDP 11/24	0:09	.000000000160298	9.9
Alpha Micro AM 100T	0:10	.00000387337	12.4
DEC Professional 350	0:11	.000000000602967	15.8
HP 9825	0:11	.00000882	9.1
NorthStar 8/16	0:11	.005859	7.2
Burroughs B22	0:12	.005859375	15.7
NEC Adv Pers Comp	0:12	.005859375	7.2
Tektronix 4054	0:12	.000000014042598	8.5
Olivetti M20	0:13	.0114136	6.2
Apple w/Saybrook 68000	0:13	.00000000011	10.4
TI Professional	0:15	.005859375	7.1
Compaq	0:15	.005859375	7.1
HP 150	0:15	.005859375	7.1
HP 9845B	0:15	.00000882	23.1
Zenith Z-100 (8088)	0:17	.005859375	9.7
Samurai S16	0:17	.01159668	6.3
ACT Apricot	0:18	.005859375	7.2
Canon AS-100	0:18	.005859375	7.2
Corona PHD	0:18	.005859375	7.2
Sharp PC-5000	0:18	.005859375	7.2
IBM 34 (short precision)	0:18	.1967	25.2
Eagle PC-2	0:19	.005859375	7.2
Apple w/uspeed	0:19	.041015624	8.0
Victor 9000	0:20	.005859375	7.2
DEC Rainbow 100	0:20	.005859375	7.2
Acorn BBC Computer	0:21	.0000128746033	5.2
Columbia MPC	0:21	.005859375	7.2
Computer Devices DOT	0:22	.005859375	7.1
Apple II w/ALF 8088	0:24	.00007558	10.4
IBM PC	0:24	.01159668	6.3
LMI CADR	0:24	.000202178789551	8.6
Monroe EC8800 (single)	0:27	.247559	10.8
GCE Vectrex	0:33	.0753174	0.9
Apple II, Titan Accel	0:33	.0010414235	4.5
Sharp MZ-80A	0:35	.00022172928	8.6
TI DS990/12 (Mini TS)	0:36	.0000000388	3.1
Lanier/AES 7200, C20	0:38	.04	4.0
Laser 2001	0:40	.0003272295	17.4
CompuPro (8085)	0:41	.187805	7.4
Monroe EC8800 (double)	0:42	.000000000060282	10.8
Epson QX-10	0:42	.0670776	7.5
Memotech MX-512	0:46	.000252962112	6.9
Coleco Adam	0:47	.000426292419	6.2
HP 9020C	0:48	.000000000127329	23.2
Grid Compass	0:48	.000000000000068	2.3
Lobo Max-80	0:48	.0338745	5.8
Lynx	0:51	.155	14.1
TRS-80 Model 4	0:53	.0670776	6.5
Panasonic JR200	0:57	.00021481514	15.1
SCS 100	0:59	.187805	7.4
IMS 8000	0:59	.187805	9.6
Alspa ACI-1	0:59	.187805	7.4
DECmate II	0:59	.187805	7.4
Xerox 820-II	0:59	.187805	7.4
Midwest Sci 6800 (SDOS)	0:59	.014842	0.6
Morrow Micro Decision	1:00	.187805	7.4
CCS 2210	1:00	.187805	7.4
Access Matrix (Actrix)	1:00	.187805	7.4
Heath H-8, Trionyx Z80	1:02	.187805	3.1
IBM 34 (long precision)	1:02	.000000001307	16.2

Computer	Time	Accuracy	Random
Vector Graphic 3 VIP	1:04	.0338745	7.5
Zenith Z-100 (8085)	1:04	.187805	9.5
Micromation Mariner	1:05	.187805	7.4
HP 125	1:08	.187805	7.4
Toshiba T100	1:09	.187805	7.4
Epson QX-10, MBasic	1:09	.187805	7.4
Osborne 01	1:10	.187805	7.4
TRS-80 Model II	1:11	.187805	3.1
ModComp Zorba 200	1:11	.187805	7.5
Mattel Aquarius	1:17	.187805	10.0
Heath H-89A (Basic-80)	1:17	.0670776	7.5
Epson QX-10	1:18	.187805	7.4
Lanier/AES Typemaster	1:18	.187805	7.4
HP-85A	1:20	.00000002	14.3
OSI Challenger 1P	1:20	.32959	5.5
Morrow MD3 (Bazic 10)	1:21	.000473	3.6
Lanier/AES 7100	1:24	.187805	7.4
HP-86A, B	1:25	.00000002	13.6
Tektronix 4051	1:26	.000000014042598	8.1
Digital Group Bytemaster	1:27	.000002779	3.6
NEC PC-8001A	1:29	.0338745	3.0
Onyx C8001/MU	1:30	.000002779	3.6
Sanyo MBC 550	1:30	.0626221	3.6
Atari 800, 1200 (MBasic)	1:35	.150879	2.1
OSI C8P-DF	1:35	.00104141235	18.6
Heath H-8	1:35	.00561523	2.7
Apple Macintosh (dbl)	1:36	.0000000458	4.2
Kaypro II	1:36	.187805	7.5
Sony SMC-70	1:37	.0000000458	3.8
HP-75C	1:38	.00000002	5.8
North Star Horizon(10 dig)	1:41	.000473	3.6
NEC PC-8201	1:44	.187805	9.3
Exidy Sorcerer	1:47	.0338745	13.2
MicroOffice RoadRunner	1:48	.187805	7.4
Teleram 3000	1:48	.187805	7.4
Apple III	1:48	.011914	6.7
Vic 20	1:49	.0010414235	23.7
Commodore SuperPET	1:50	.000209331512	20.4
HP 9830B	1:52	.00000889	13.1
Commodore 64	1:53	.0010414235	8.9
Apple IIe, II+	1:53	.0010414235	12.0
Franklin Ace 1000, 1200	1:53	.0010414235	12.0
NEC PC-8801A	1:54	.187805	7.4
Rockwell Aim 65	1:56	.00104141235	14.7
Compucolor II	1:57	.0338745	1.4
TRS-80 Model III	1:59	.0338745	5.8
Micro Color Computer	1:59	.000596284867	7.6
Commodore CBM 8032, 2001	2:01	.0010414235	1.4
Heath/Zenith H-89A	2:04	.187805	7.4
Atari 2600 Graduate	2:15	.000224679708	7.9
TRS-80 Model I	2:19	.0338745	12.0
Color Computer	2:23	.000596284867	7.3
Atari 800 (fastchip)	2:23	.006875	7.0
Dragon 32	2:29	.000596284867	7.3
Epson HX-20	2:36	.0338745	23.8
DAI	2:38	.210266	9.6
Timex/Sinclair 1000 (fast)	2:43	.00041294098	8.7
Interact Model R	2:50	.0338745	8.1
Wang 2210	2:52	.000011432	12.5
OSI Challenger 1	3:07	.0010414235	13.9
Lanier/AES Superplus	3:30	.187805	7.4
SpectraVideo 318/328	3:40	.0000002058	0.7
TI 99/4A	3:46	.00000011	2.6
Radio Shack PC-3	4:00	.00000627	10.9
TI 99/4A, Extended	4:10	.00000011	10.7
Oric-1	4:10	.00104141235	12.1
Datapoint 1800	4:16	.0000012042	11.3
Sinclair ZX81	4:23	.0006685257	6.3
Sinclair Spectrum	4:39	.0006685257	3.5
TRS-80 Model 100	4:54	.0000002058	0.7
Timex 2068	4:55	.00066876411	12.8
Casio FP-200	5:05	.00723	30.3
Sharp PC-1500 (RS PC-2)	5:10	.0000288	7.8
Cromemco C-10	5:18	.00000001	16.1
TI CC-40	5:41	.00000011	6.2
Sanyo PHC-25	5:41	.000267505646	10.2
Franklin 1200 (CBasic)	5:47	.0000000744	14.3
Canon X-07	6:03	.0000002058	24.9
Atari 1200XL	6:45	.013959	5.2
Atari 400/800	6:48	.012959	22.8
Casio FX-702P	9:32	.00000627	3.5
Sharp EL-5500	9:55	.0000288	7.2
Sharp PC-1250	11:14	.0000288	5.9
Magic	11:45	.0000000744	---
Midwest Sci 6800	13:48	.1597	11.5
Timex/Sinclair 1000(slow)	16:55	.00041294098	7.4
IBM System 23	18:48	.00000005503	3.4
HP-97	23:00	.000034	---
Sharp PC-1211	28:32	.00002882	---
Central Data 2650	82:31	.033526	4.6
TI SR-50 (Calculator)	12.7 days	.193704289	16.4