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

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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)
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Computer	Time	Accuracy	Random
Cray 1	0:00.01	.0000000014	6.1
Amdahl 470	0:00.04	.0000000811846	12.4
Harris H-1000	0:00.06	.0000038189719 75	8.9
IBM 370/67	0:00.08	.0000000345835	4.6
Control Data Cyber 855	0:00.09	.0000000354783	6.1
Harris H-800	0:00.14	.0000044181942 94	8.9
DEC System 10	0:00.10	.00494385	8.9
DEC VAX 11/780	0:00.20	.00113525	5.3
Burroughs B6810	0:00.02	.0000005 8856304	21.6
DEC VAX 11/780 (double)	0:01.5	.0000003 8163283	5.3
DEC PDP 11/44	0:01.0	.0000000 8160298	2.4
DEC PDP 11/70 (RSTS)	0:02	.0000000 8160298	15.8
IBM PC (Basic87)	0:02	.0000000 8088682	87.3
Prime 550	0:02	.000000872076	12.2
HP 9845B (390 bit slice)	0:03	.00000002	23.1
Control Data Cyber 730	0:03	.0000000 8354783	6.1
HP 3000/44, single pre.	0:04	.112549	6.8
HP 3000/44, double pre.	0:05	.0000000 8827199 6	9.4
HP 9836	0:05	.0000000 8127329	5.5
Control Data 3500	0:05	.001382457	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 (BSTS)	0:07	.0000000 8158025	11.5
IBM S/38, model 7	0:07	.0000000 0000105	4.6
Wang PC	0:07	.005059375	7.2
Tandy Model 2000	0:07	.005859375	7.2
Data General Eclipse	0:08	.0000000 0345035	1.1
Eagle 1600	0:09	.005059375	7.2
Stearns Micro	0:08	.005859375	7.1
Burroughs B20	0:09	.005938744544977	3.2
Symbolics 3600	0:09	.111328125	0.5
DEC PDP 11/24	0:09	.0000000 0158298	9.9
Alpha Micro AM 100T	0:10	.000003387337	12.4
DEC Professional 350	0:11	.0000000 0602967	15.8
HP 9825	0:11	.00000002	9.1
NorthStar 8/16	0:11	.005859	7.2
Burroughs B22	0:12	.005859375	15.7
WEC Adv Pers Comp	0:12	.005859375	7.2
Tektronix 4054	0:12	.0000000 1 4042590	0.5
Olivetti M20	0:13	.0114136	6.2
Apple w/Saybrook 68000	0:13	.0000000 0011	10.4
TI Professional	0:15	.005059375	7.1
Compaq	0:15	.005859375	7.1
HP 150	0:15	.005059375	7.1
HP 9845B	0:15	.00000002	23.1
Zenith Z-100 (8088)	0:17	.005059375	9.7
Semurai SI6	0:17	.01159668	6.3
ACT Apricot	0:18	.005059375	7.2
Cenon A8-100	0:18	.005059375	7.2
Corona PHO	0:16	.005059375	7.2
Sharp PC-5000	0:18	.005859375	7.2
IBM 34 (short precision)	0:18	.1967	25.2
Eagle PC-2	0:19	.005059375	7.2
Apple w/uspeed	0:19	.041815624	0.0
Victor 9000	0:20	.005859375	7.2
DEC Rainbow 100	0:20	.005059375	7.2
Acorn BBC Computer	0:21	.0000120746033	5.2
Columbia MPC	0:21	.005859375	7.2
Computer Devices DOT	0:22	.005059375	7.1
Apple II w/ALF 8000	0:24	.00007550	10.4
IBM PC	0:24	.01159668	6.3
LNI CADR	0:24	.0002021 70709551	8.6
Monroe EC8000 (single)	0:27	.247559	10.0
GCE Vectrex	0:33	.0753174	0.9
Apple II, Titan Accel	0:33	.0018414235	4.5
Sharp MZ-80A	0:35	.00022172920	0.6
TI DS990/12 (Mini TS)	0:36	.0000000300	3.1
Lanier/AES 7200, C20	0:38	.04	4.0
Laser 2001	0:40	.0003272295	17.4
CompuPro (8085)	0:41	.107805	7.4
Monroe EC8000 (double)	0:42	.0000000 0060202	10.0
Epson QX-10	0:42	.0670776	7.5
Memotech MX-512	0:46	.000252962112	6.9
Coleco Adam	0:47	.000426292419	6.2
HP 982WC	0:48	.0000000 0127329	23.2
Grid Compass	0:48	.0000000 0000060	2.3
Lobo Max-80	0:48	.0330745	5.0
Lynx	0:51	.155	14.1
TRS-80 Model 4	0:53	.0670776	6.5
Panasonic JR200	0:57	.00021401514	15.1
OCS 100	0:59	.107885	7.4
IMS 8000	0:59	.107805	9.6
Alape ACI-1	0:59	.107805	7.4
DECmate II	0:59	.107005	7.4
Xerox 820-II	0:59	.107005	7.4
Midwest Sci 6800 (SDOS)	0:59	.014042	0.6
Morrow Micro Decision	1:00	.107005	7.4
CCS 2210	1:00	.107005	7.4
Access Matrix (Actrix)	1:00	.107805	7.4
Heath H-8, Trionyx Z80	1:02	.107805	3.1
IBM 34 (long precision)	1:02	.0000000 01307	16.2
Vector Graphic 3 VIP	1:04	.0330745	7.5
Zenith Z-100 (8085)	1:04	.107005	9.5
Micromation Mariner	1:05	.107005	7.4
HP 125	1:00	.107005	7.4
Toshiba T100	1:09	.107005	7.4
Epson QX-10, MBasic	1:09	.107805	7.4
Osborne D1	1:10	.107005	7.4
TRS-80 Model II	1:11	.107805	3.1
ModComp Zorba 200	1:11	.107005	7.5
Mattel Aquarius	1:17	.107005	10.0
Heath H-89A (Basic-80)	1:17	.0670776	7.5
Epson QX-10	1:10	.107805	7.4
Lanier/AES Typemaster	1:10	.107805	7.4
HP-85A	1:20	.00000002	14.3
DSI Challenger 1P	1:20	.32959	5.5
Morrow MD3 (Basic 10)	1:21	.000473	3.6
Lanier/AES 7100	1:24	.107805	7.4
HP-86A, B	1:25	.00000002	13.6
Tektronix 4051	1:26	.0000000 14042598	0.1
Digital Group Bytemaster	1:27	.000002779	3.6
NEC PC-8001A	1:29	.0330745	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	.00184141235	10.6
Heath H-8	1:35	.00561523	2.7
Apple Macintosh (dbl)	1:36	.0000000458	4.2
Kaypro II	1:36	.107805	7.5
Sony SMC-70	1:37	.0000000450	3.0
HP-75C	1:30	.00000002	5.0
North Star Horizon(10 dig)	1:41	.000473	3.6
NEC PC-8201	1:44	.107005	9.3
Exidy Sorcerer	1:47	.0330745	13.2
MicroOffice RoadRunner	1:48	.107805	7.4
Teleram 3000	1:40	.107805	7.4
Apple III	1:40	.811914	6.7
Vic 20	1:49	.0018414235	23.7
Commodore SuperPET	1:50	.000209331512	20.4
HP 9030B	1:52	.00000009	13.1
Commodore 64	1:53	.0018414235	0.9
Apple IIe, II+	1:53	.0018414235	12.0
Franklin Ace 1000, 1200	1:53	.0018414235	12.0
NEC PC-8801A	1:54	.107005	7.4
Rockwell Aim 65	1:56	.00184141235	14.7
Compucolor II	1:57	.0330745	1.4
TRS-80 Model III	1:59	.0330745	5.0
Micro Color Computer	1:59	.0005962 84067	7.6
Commodore CBM 8032, 2001	2:01	.0018414235	1.4
Heath/Zenith H-89A	2:04	.107005	7.4
Atari 2600 Graduate	2:15	.0002246 79700	7.9
TRS-80 Model I	2:19	.0330745	12.0
Color Computer	2:23	.0005962 84067	7.3
Atari 800 (fastchip)	2:23	.006875	7.0
Dragon 32	2:29	.0005962 84067	7.3
Epson HX-20	2:36	.0330745	23.0
DAI	2:30	.210266	9.6
Timex/Sinclair 1000 (fast)	2:43	.00041294090	0.7
Interact Model 8	2:50	.0330745	0.1
Wang 2210	2:52	.000011432	12.5
OSI Challenger I	3:07	.0018414235	13.9
Lanier/AES Superplus	3:30	.107805	7.4
SpectraVideo 318/328	3:40	.0000002050	0.7
TI 99/4A	3:46	.00008811	2.6
Radio Shack PC-3	4:00	.00000627	10.9
TI 99/4A, Extended	4:10	.00000011	10.7
Oric-1	4:10	.00184141235	12.1
Datapoint 1000	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	.0000002050	0.7
Timex 2068	4:55	.0006676411	12.0
Casio PP-200	5:05	.00723	30.3
Sharp PC-1500 (RS PC-2)	5:10	.0000200	7.0
Cromemco C-10	5:10	.00000001	16.1
TI CC-40	5:41	.00000011	6.2
Sanyo PHC-25	5:41	.0002675 05646	10.2
Prenklin 1200 (CBasic)	5:47	.0000000744	14.3
Canon X-07	6:03	.0000002050	24.9
Atari 1200XL	6:45	.013959	5.2
Atari 400/800	6:40	.012959	22.0
Casio FX-702P	9:32	.00000627	3.5
Sharp EL-5500	9:55	.0000200	7.2
Sharp PC-1250	11:14	.0000200	5.9
Hagle	11:45	.0000000744	---
Midwest Sci 6800	13:48	.1597	11.5
Timex/Sinclair 1000(slow)	16:55	.00041294090	7.4
IBM System 23	10:40	.0000000 05503	3.4
HP-97	23:00	.000034	---
Sharp PC-1211	20:32	.00002002	---
Centrel Data 2650	82:31	.033526	4.6
TI 88-58 (Calculator)	12.7 days	.193704289	16.4