

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 140 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	Computer	Time	Accuracy	Random
Cray 1	0:00.01	.0000000014	6.1	Epson GX-10	1:09	.187805	7.4
Amdahl 470	0:00.04	.00000000011646	12.4	Osborne 01	1:10	.187805	7.4
DEC System 10	0:00.10	.00494365	8.9	TRS-80 Model II	1:11	.187805	3.1
DEC VAX 11/780	0:00.20	.00113525	5.3	Mattel Aquarius	1:17	.187805	10.8
DEC VAX 11/780 (double)	0:01.5	.000000000163283	5.3	Epson GX-10	1:18	.187805	7.4
HP 9845B (390 bit slice)	0:03	.000000002	23.1	HP-85A	1:20	.000000002	14.3
Control Data Cyber 730	0:03	.00000000355	6.1	OSI Challenger 1P	1:20	.32959	5.5
HP 3000 Series 44	0:04	.112549	12.9	HP-75C	1:21	.000473	3.6
HP 9836	0:05	.000000000127329	5.5	Morrow MD3 (Basic 10)	1:25	.000000002	13.6
Control Data 3500	0:05	.00000000076	2.8	HP-86A, B	1:26	.000000014042598	8.1
Wang 2200 GVP	0:05	.001302457	3.9	Tektronix 4051	1:27	.0000002779	3.6
Alpha Micro AM 1000E	0:05	.000000936911	12.4	Digital Group Bytemaster	1:29	.0338745	3.8
IBM PC (Compiled Basic)	0:06	.01159668	28.4	NEC PC-8001A	1:35	.150879	2.1
DEC PDP 11/44 (RSTS)	0:07	.000000000150025	11.5	Atari 800 (MBasic)	1:36	.187805	7.5
Wang PC	0:07	.005859375	7.2	Kaypro II	1:37	.00000000458	3.8
Tandy Model 2000	0:07	.005859375	7.2	Sony SMC-70	1:38	.000000002	5.8
Data General Eclipse	0:08	.000000000345035	1.1	HP-75C	1:38	.000473	3.6
Eagle 1600	0:08	.005859375	7.2	North Star Horizon(10 dig)	1:41	.187805	9.3
Stearns Micro	0:09	.005859375	7.1	NEC PC-8201	1:44	.187805	7.4
Burroughs B20	0:09	.005938744544977	3.2	MicroOffice RoadRunner	1:48	.187805	7.4
Symbolics 3600	0:09	.111328125	8.5	Teleram 3000	1:48	.011914	6.7
DEC PDP 11/24	0:09	.000000000160298	9.9	Apple III	1:48	.0010414235	23.7
Alpha Micro AM 100T	0:10	.000000367337	12.4	Vic 20	1:49	.000209331512	20.4
HP 9825	0:11	.000000002	9.1	Commodore SuperPET	1:50	.000000009	13.1
NorthStar 8/16	0:11	.005059	7.2	HP 9830B	1:52	.0010414235	8.9
Burroughs B22	0:12	.005859375	15.7	Commodore 64	1:53	.0010414235	12.0
NEC Adv Pers Comp	0:12	.005859375	7.2	Apple II plus	1:53	.0010414235	12.0
Tektronix 4054	0:12	.000000014042598	8.5	Apple IIe	1:54	.187805	7.4
Olivetti M20	0:13	.0114136	6.2	NEC PC-8001A	1:54	.0010414235	14.7
Saybrook 60000 (in Apple)	0:13	.00000000011	10.4	Rockwell Aim 65	1:56	.0338745	1.4
TI Professional	0:15	.005859375	7.1	Compucolor II	1:57	.0338745	5.8
Compaq	0:15	.000000002	23.1	TRS-80 Model III	1:59	.000596204867	7.6
HP 9845B	0:15	.005859375	9.7	Micro Color Computer	1:59	.0010414235	1.4
Zenith Z-100 (0000)	0:17	.005859375	6.3	Commodore CBM 8032, 2001	2:01	.187805	7.4
Samurai S16	0:17	.01159668	7.2	Heath/Zenith H-89A	2:04	.000224679708	7.9
ACT Apricot	0:18	.005859375	7.2	Atari 2600 Graduate	2:15	.0338745	12.0
Sharp PC-5000	0:18	.005859375	7.2	TRS-80 Model I	2:19	.000596204867	7.3
IBM 34 (short precision)	0:18	.1967	25.2	Color Computer	2:23	.006075	7.0
Eagle PC-2	0:19	.005859375	7.2	Atari 800 (fastchip)	2:23	.000596204867	7.3
DEC Rainbow 100	0:20	.005859375	7.2	Dragon 32	2:29	.0338745	23.8
Acorn BBC Computer	0:21	.0000120746033	5.2	Epson HX-20	2:36	.210266	9.6
Columbia MPC	0:21	.005859375	7.2	DAI	2:38	.00041294090	8.7
Computer Devices DOT	0:22	.005859375	7.1	Times/Sinclair 1000 (fast)	2:43	.0338745	8.1
IBM PC	0:24	.01159668	6.3	Interact Model R	2:50	.000011432	12.5
LMI CADR	0:24	.000202178789551	8.6	Wang 2210	2:52	.0010414235	13.9
GCE Vectrex	0:33	.0753174	0.9	OSI Challenger 1	3:07	.0000002058	0.7
Apple II, Titan Accel	0:33	.0010414235	4.5	SpectraVideo 318/328	3:40	.00000011	2.6
Sharp MX-80A	0:35	.00022172928	8.6	TI 99/4A	3:46	.00000027	10.9
TI DS990/12 (Mini TS)	0:36	.00000000300	3.1	Radio Shack PC-3	4:00	.00000011	10.7
Laser 2001	0:40	.0003272295	17.4	TI 99/4A, Extended	4:10	.0010414235	12.1
Memotech MX-S12	0:46	.000252962112	6.9	Oric-1	4:10	.0000012042	11.3
Coleco Adam	0:47	.000426292419	6.2	Datapoint 1800	4:16	.0006605257	6.3
HP 9820C	0:48	.000000000127329	23.2	Sinclair ZX81	4:23	.0006605257	3.5
Lobo Max-80	0:48	.0338745	5.8	Sinclair Spectrum	4:39	.0000002058	0.7
Lynx	0:51	.155	14.1	TRS-80 Model 100	4:54	.00066076411	12.0
TRS-80 Model 4	0:53	.00670776	6.5	Times 2066	4:55	.00723	30.3
Panasonic JR200	0:57	.00021401514	15.1	Casio FP-200	5:05	.0000208	7.8
SCS 100	0:59	.187805	7.4	Sharp PC-1500 (RS PC-2)	5:10	.00000001	16.1
IMS 8000	0:59	.187805	9.6	Cromemco C-10	5:18	.00000011	6.2
Alspa ACI-1	0:59	.187805	7.4	TI CC-40	5:41	.000267505646	10.2
DECmate II	0:59	.187805	7.4	Sanyo PNC-25	5:41	.0000002058	24.9
Xerox 820-II	0:59	.187805	7.4	Canon X-07	6:03	.013959	5.2
Morrow Micro Decision	1:00	.187805	7.4	Atari 1200XL	6:45	.012959	22.8
Heath H-8, Trionyx 200	1:02	.187805	3.1	Atari 400/800	6:48	.0000208	5.9
IBM 34 (long precision)	1:02	.000000001307	16.2	Sharp PC-1250	11:14	.000000744	---
Vector Graphic 3 VIP	1:04	.0338745	7.5	Magic	11:45	.0000000744	7.4
Zenith Z-100 (0005)	1:04	.187805	9.5	Times/Sinclair 1000(slow)	16:55	.00041294090	3.4
Micromation Mariner	1:05	.187805	7.4	IBM System 23	18:48	.00000005503	---
HP 125	1:08	.187805	7.4	HP-97	23:00	.000024	---
Toshiba T100	1:09	.187805	7.4	Sharp PC-1211	28:32	.00002802	---
				TI SR-50 (Calculator)	12.7 days	.193784209	16.4