OO

General

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
C++	2,286	1,227	67,162	219,207	1	1	compiled
Ada	3,501	1,941	96,143	312,421	2	2	compiled
Java	3,992	1,904	113,273	337,046	3	3	vm
JavaScript	13,367	8,203	192,353	851,364	4	4	interpreted
Dart	13,773	8,765	199,232	956,296	5	5	interpreted
PHP	78,338	39,583	2380,527	6462,751	6	6	interpreted
Python	143,993	120,475	6286,523	19067,487	7	7	interpreted
Perl	191,956	115,179	6641,842	19229,640	8	8	interpreted

Binary

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
C++	1,129	0,630	41,230	155,727	1	1	compiled
Java	3,306	1,440	111,840	346,193	3	2	vm
Ada	2,822	1,983	95,020	385,866	2	3	compiled
JavaScript	21,349	11,455	312,140	1246,836	5	4	interpreted
Dart	17,197	12,054	290,270	1262,578	4	5	interpreted
PHP	42,316	17,612	1397,510	3402,135	6	6	interpreted
Python	45,003	20,242	1793,460	3979,624	7	7	interpreted
Perl	96,097	67,624	3542,200	11474,379	8	8	interpreted

Fannkuch

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
C++	6,123	2,492	219,890	548,432	1	1	compiled
Ada	7,351	2,963	264,980	628,843	2	2	compiled
Java	8,241	3,451	311,380	735,303	3	3	vm
JavaScript	33,663	24,803	413,900	1805,279	4	4	interpreted
Dart	38,678	27,233	487,290	2485,435	5	5	interpreted
PHP	125,975	46,713	5731,880	8985,842	6	6	interpreted
Perl	249,418	105,385	11133,490	19947,253	7	7	interpreted
Python	31,558	117,657	12784,090	21469,747	8	8	interpreted

Fasta

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
C++	1,164	1,264	34,880	142,337	1	1	compiled
Java	1,249	1,490	35,860	143,848	2	2	vm
Ada	2,765	2,512	40,450	167,676	3	3	compiled
JavaScript	5,098	3,776	64,840	233,328	5	4	interpreted
Dart	4,787	4,210	63,610	333,188	4	5	interpreted
PHP	29,508	19,970	430,730	1908,741	6	6	interpreted
Perl	61,463	31,868	2684,330	3101,250	8	7	interpreted
Python	74,111	49,800	1061,410	4508,876	7	8	interpreted

Mandelbrot

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
C++	0,864	0,480	32,440	125,188	1	1	compiled
Ada	3,192	1,033	97,590	247,562	2	2	compiled
Java	3,657	1,226	114,230	300,556	3	3	vm
JavaScript	8,278	1,999	233,040	494,818	5	4	interpreted
Dart	10,046	2,740	214,740	571,253	4	5	interpreted
PHP	73,741	26,315	3374,290	5152,519	6	6	interpreted
Python	16,333	74,095	7790,160	14118,908	7	7	interpreted
Perl	389,587	153,444	16965,060	29988,293	8	8	interpreted

N-body

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
C++	3,770	2,339	57,300	199,007	2	1	compiled
Ada	4,098	2,623	51,790	216,298	1	2	compiled
Java	5,839	3,389	65,150	272,382	3	3	vm
JavaScript	6,763	5,078	78,740	343,813	4	4	interpreted
Dart	6,827	4,137	84,330	361,120	5	5	interpreted
PHP	179,360	118,795	2468,300	11879,277	6	6	interpreted
Python	559,214	364,146	7879,920	35443,585	8	7	interpreted
Perl	335,391	322,761	4663,480	35896,837	7	8	interpreted

Spectral

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
C++	0,665	0,160	17,230	23,288	1	1	compiled
Java	1,659	0,426	41,180	79,640	3	2	vm
Ada	0,775	0,530	27,030	90,204	2	3	compiled
JavaScript	5,048	2,108	51,460	134,893	4	4	interpreted
Dart	5,102	2,217	55,150	185,507	5	5	interpreted
PHP	19,128	8,093	880,450	1640,479	7	6	interpreted
Perl	19,782	9,993	862,490	2386,203	6	7	interpreted
Python	137,738	96,909	6410,100	18617,474	8	8	interpreted

Imperative

General

ıge	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
C	2,364	1,201	66,643	206,135	1	1	compiled
C++	2,286	1,227	67,162	219,207	2	2	compiled
Ada	3,501	1,941	96,143	312,421	3	3	compiled
Pascal	7,601	4,486	157,002	671,455	5	5	compiled
Erlang	83,407	41,769	2805,190	6868,359	10	10	vm
Perl	191,956	115,179	6641,842	19229,640	14	14	interpreted

Binary

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
C	1,125	0,622	39,800	148,258	1	1	compiled
C++	**1,129**	0,630	41,230	155,727	2	2	compiled
Ada	2,822	1,983	95,020	385,866	3	3	compiled
ErLang	7,327	3,647	266,140	774,015	5	4	vm
Pascal	16,079	10,287	214,640	856,780	4	5	compiled
Perl	96,097	67,624	3542,200	11474,379	6	6	interpreted

Fannkuch

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
C	6,076	2,557	215,920	527,574	1	1	compiled
C++	6,123	2,492	219,890	548,432	2	2	compiled
Ada	7,351	2,963	264,980	628,843	3	3	compiled
Pascal	9,807	4,104	343,550	844,977	4	4	compiled
ErLang	101,839	39,444	4148,380	7654,466	5	5	vm
Perl	249,418	105,385	11133,490	19947,253	6	6	interpreted

Fasta

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
C	0,973	1,149	27,640	114,083	1	1	compiled
C++	1,164	1,264	34,880	142,337	2	2	compiled
Ada	2,765	2,512	40,450	167,676	3	3	compiled
Pascal	5,478	4,343	68,630	295,862	4	4	compiled
ErLang	27,852	19,310	477,810	1947,949	5	5	vm
Perl	61,463	31,868	2684,330	3101,250	6	6	interpreted

Mandelbrot

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
C	1,142	0,479	35,390	112,623	2	1	compiled
C++	0,864	0,480	32,440	125,188	1	2	compiled
Ada	3,192	1,033	97,590	247,562	3	3	compiled
Pascal	7,190	4,981	212,670	766,604	4	4	compiled
ErLang	194,726	81,386	9172,720	15407,026	5	5	vm
Perl	389,587	153,444	16965,060	29988,293	6	6	interpreted

N-body

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
C	4,190	2,240	59,450	176,833	3	1	compiled
C++	3,770	2,339	57,300	199,007	2	2	compiled
Ada	4,098	2,623	51,790	216,298	1	3	compiled
Pascal	5,702	3,095	64,870	220,815	4	4	compiled
ErLang	150,698	100,138	1998,660	9416,256	5	5	vm
Perl	335,391	322,761	4663,480	35896,837	6	6	interpreted

Spectral

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
C++	0,665	0,160	17,230	23,288	1	1	compiled
C	0,677	0,160	21,660	27,459	2	2	compiled
Pascal	1,349	0,105	37,650	33,187	4	3	compiled
Ada	0,775	0,530	27,030	90,204	3	4	compiled
ErLang	17,998	6,687	767,430	1311,304	5	5	vm
Perl	19,782	9,993	862,490	2386,203	6	6	interpreted

Functional

General

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
Haskell	8,236	5,293	206,918	684,366	1	1	compiled
Erlang	83,407	41,769	2805,190	6868,359	2	2	vm
Ruby	166,949	105,054	5636,157	17183,644	3	3	interpreted
Perl	191,956	115,179	6641,842	19229,640	4	4	interpreted

Binary

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
ErLang	7,327	3,647	266,140	774,015	1	1	vm
Haskell	11,582	7,046	270,150	816,672	2	2	compiled
Ruby	26,634	11,415	855,120	2412,344	3	3	interpreted
Perl	96,097	67,624	3542,200	11474,379	4	4	interpreted

Fannkuch

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
Haskell	14,666	10,476	433,680	1593,806	1	1	compiled
ErLang	101,839	39,444	4148,380	7654,466	2	2	vm
Perl	249,418	105,385	11133,490	19947,253	3	3	interpreted
Ruby	315,583	224,567	14064,980	42901,450	4	4	interpreted

Fasta

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
Haskell	5,728	4,217	205,520	664,002	1	1	compiled
ErLang	27,852	19,310	477,810	1947,949	2	2	vm
Perl	61,463	31,868	2684,330	3101,250	4	3	interpreted
Ruby	61,216	42,440	852,300	4144,757	3	4	interpreted

Mandelbrot

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
Haskell	6,028	4,193	169,600	569,658	1	1	compiled
ErLang	194,726	81,386	9172,720	15407,026	2	2	vm
Ruby	245,248	106,537	11050,980	20358,194	3	3	interpreted
Perl	389,587	153,444	16965,060	29988,293	4	4	interpreted

N-body

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type	Paradigm
Haskell	10,037	5,610	127,820	407,153	1	1	compiled	Funcional
ErLang	150,698	100,138	1998,660	9416,256	2	2	vm	Imperative, Funcional
Ruby	281,470	210,540	3870,670	20646,820	3	3	interpreted	Scripting, Funcional
Perl	335,391	322,761	4663,480	35896,837	4	4	interpreted	OO, Imperative, Funcional

Spectral

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
Haskell	1,373	0,217	34,740	30,833	1	1	compiled
ErLang	17,998	6,687	767,430	1311,304	2	2	vm
Perl	19,782	9,993	862,490	2386,203	3	3	interpreted
Ruby	71,540	34,829	3122,890	6694,626	4	4	interpreted

Scripting

General

	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
JavaScript	13,367	8,203	192,353	851,364	1	1	interpreted
Dart	13,773	8,765	199,232	956,296	2	2	interpreted
PHP	78,338	39,583	2380,527	6462,751	3	3	interpreted
JRuby	113,818	80,307	3527,398	12492,886	4	4	interpreted
Ruby	166,949	105,054	5636,157	17183,644	5	5	interpreted
Python	143,993	120,475	6286,523	19067,487	6	6	interpreted

Binary

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
JavaScript	21,349	11,455	312,140	1246,836	2	1	interpreted
Dart	17,197	12,054	290,270	1262,578	1	2	interpreted
Ruby	26,634	11,415	855,120	2412,344	4	3	interpreted
Jruby	19,276	12,871	720,530	2682,286	3	4	interpreted
PHP	42,316	17,612	1397,510	3402,135	5	5	interpreted
Python	45,003	20,242	1793,460	3979,624	6	6	interpreted

Fannkuch

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
JavaScript	33,663	24,803	413,900	1805,279	1	1	interpreted
Dart	38,678	27,233	487,290	2485,435	2	2	interpreted
PHP	125,975	46,713	5731,880	8985,842	3	3	interpreted
Python	31,558	117,657	12784,090	21469,747	5	4	interpreted
Jruby	219,148	145,133	7819,030	25314,842	4	5	interpreted
Ruby	315,583	224,567	14064,980	42901,450	6	6	interpreted

Fasta

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
JavaScript	5,098	3,776	64,840	233,328	2	1	interpreted
Dart	4,787	4,210	63,610	333,188	1	2	interpreted
PHP	29,508	19,970	430,730	1908,741	3	3	interpreted
Jruby	49,509	37,142	912,930	3722,026	5	4	interpreted
Ruby	61,216	42,440	852,300	4144,757	4	5	interpreted
Python	74,111	49,800	1061,410	4508,876	6	6	interpreted

Mandelbrot

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
JavaScript	8,278	1,999	233,040	494,818	2	1	interpreted
Dart	10,046	2,740	214,740	571,253	1	2	interpreted
PHP	73,741	26,315	3374,290	5152,519	3	3	interpreted
Python	16,333	74,095	7790,160	14118,908	4	4	interpreted
Ruby	245,248	106,537	11050,980	20358,194	6	5	interpreted
Jruby	217,118	159,168	8401,950	33834,189	5	6	interpreted

N-body

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
JavaScript	6,763	5,078	78,740	343,813	1	1	interpreted
Dart	6,827	4,137	84,330	361,120	2	2	interpreted
Jruby	98,407	68,549	1889,850	8188,760	3	3	interpreted
PHP	179,360	118,795	2468,300	11879,277	4	4	interpreted
Ruby	281,470	210,540	3870,670	20646,820	5	5	interpreted
Python	559,214	364,146	7879,920	35443,585	6	6	interpreted

Spectral

Language	Time SwE	Time HwM	Energy SwE	Energy HwM	Position SwE	Position HwM	type
JavaScript	5,048	2,108	51,460	134,893	1	1	interpreted
Dart	5,102	2,217	55,150	185,507	2	2	interpreted
PHP	19,128	8,093	880,450	1640,479	3	3	interpreted
Ruby	71,540	34,829	3122,890	6694,626	5	4	interpreted
Jruby	79,449	58,982	1420,100	6978,705	4	5	interpreted
Python	137,738	96,909	6410,100	18617,474	6	6	interpreted