

AMD Phenom II X2 550

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	8.28	7.61	7.19	6.99	7.11	7.09	7.57	7.35	217.28
1.0	6.95	7.00	7.02	6.95	7.02	7.03	7.02	6.97	48.06
1e10	7.02	6.99	6.97	7.01	7.02	6.95	6.89	6.98	48.00
1e+200	7.12	7.01	6.97	6.93	6.97	7.41	6.95	7.15	48.31
1e-300	7.14	7.32	6.95	7.42	7.00	7.27	7.42	6.98	48.55
1e-42	7.32	7.36	6.95	7.16	7.35	7.63	8.05	7.32	48.66
256	7.27	7.04	7.18	7.73	7.62	6.94	7.25	7.15	48.27
257	7.54	7.90	7.58	7.24	7.24	7.93	7.28	7.95	48.97
1e-320	217.85	49.43	48.38	48.29	48.46	49.26	49.24	49.49	217.67

Figure 1: Addition timing for double precision floats on AMD Phenom II X2 550

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	7.28	7.26	7.54	8.28	7.28	7.74	7.27	7.23	217.80
1.0	7.70	7.80	7.34	7.67	7.41	7.88	7.68	7.57	48.71
1e10	7.46	7.53	7.40	7.27	7.62	7.35	7.39	7.27	48.42
1e+200	6.99	6.92	7.30	7.68	7.39	7.39	6.92	7.04	48.74
1e-300	6.99	6.97	6.97	6.90	6.98	6.95	6.90	6.94	47.99
1e-42	7.25	7.33	7.25	7.45	8.06	7.27	7.45	7.40	48.62
256	8.03	7.67	7.63	7.60	7.67	8.01	7.62	7.56	48.95
257	7.78	7.48	7.38	7.31	7.52	7.31	7.37	7.31	48.20
1e-320	217.34	48.78	48.06	48.02	48.18	48.04	48.26	48.07	48.03

Figure 2: Subtraction timing for double precision floats on AMD Phenom II X2 550

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	8.52	8.22	7.02	7.02	7.02	216.20	216.21	7.02	7.02
1.0	7.02	7.02	7.02	7.02	7.02	48.06	48.06	7.01	7.02
1e10	7.02	7.02	7.02	7.02	7.02	48.10	48.10	7.02	7.02
1e+30	7.02	7.01	7.02	7.02	7.02	48.06	48.06	7.02	7.02
1e-30	7.02	7.02	7.02	7.02	7.02	48.06	48.06	7.02	7.02
1e-41	216.19	48.06	48.06	48.06	48.06	48.06	216.17	48.06	48.06
1e-42	216.21	48.07	48.07	48.06	48.06	216.19	48.06	48.06	48.06
256	7.02	7.02	7.02	7.01	7.01	48.06	48.05	7.01	7.01
257	7.02	7.01	7.02	7.02	7.02	48.06	48.06	7.01	7.01

Figure 3: Subtraction timing for single precision floats on AMD Phenom II X2 550

	Divisor								
Dividend	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	11.01	11.01	11.01	11.01	11.01	63.06	63.06	11.01	11.01
1.0	11.01	11.01	11.01	11.02	11.01	63.07	63.08	11.02	11.02
1e10	11.01	11.01	11.01	11.01	11.01	63.06	63.06	11.01	11.01
1e+30	11.01	11.01	11.01	11.01	11.01	63.06	63.06	11.01	11.01
1e-30	11.01	11.01	190.11	190.14	11.01	63.06	63.06	11.01	11.01
1e-41	63.10	245.23	245.21	245.21	63.06	63.06	63.05	245.20	245.18
1e-42	63.05	245.19	245.28	245.36	63.11	63.08	63.07	245.21	245.23
256	11.01	11.01	11.01	11.01	11.01	63.07	63.07	11.01	11.01
257	11.01	11.01	11.01	11.01	11.01	63.05	63.05	11.01	11.01

Figure 4: Division timing for single precision floats on AMD Phenom II X2 550

Operand	Cycle count
0.0	17.03
1.0	17.05
1e10	17.03
1e+30	17.03
1e-30	17.03
1e-41	72.09
1e-42	72.10
256	17.03
257	17.03

Figure 5: Square root timing for single precision floats on AMD Phenom II X2 550

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	7.06	7.38	7.04	7.07	7.95	7.16	7.20	7.06	49.01
1.0	7.37	7.11	7.12	7.44	7.09	6.98	7.53	6.93	218.02
1e10	7.66	7.39	7.00	6.97	7.01	7.11	7.41	7.28	217.59
1e+200	7.30	7.22	6.95	6.95	7.28	6.96	6.97	7.33	48.65
1e-300	7.97	7.53	7.14	7.14	177.44	177.63	7.27	7.07	217.88
1e-42	6.94	7.00	7.01	6.99	177.11	6.98	7.01	7.01	217.50
256	7.69	7.97	8.03	7.04	7.17	7.94	7.26	7.88	217.90
257	7.16	7.19	7.09	6.95	6.95	7.12	7.11	7.75	218.09
1e-320	48.02	217.86	217.47	48.77	218.04	218.26	218.26	218.32	217.47

Figure 6: Multiplication timing for double precision floats on AMD Phenom II X2 550

	Divisor								
Dividend	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	15.44	15.55	15.00	14.97	14.97	14.98	15.38	14.94	70.99
1.0	14.97	15.08	15.00	15.02	15.01	14.91	15.08	15.25	71.03
1e10	15.71	15.39	15.01	15.01	14.96	15.57	15.23	15.02	71.04
1e+200	15.93	15.96	15.83	15.05	15.39	16.03	15.33	15.91	71.59
1e-300	15.58	16.11	197.07	196.94	15.96	15.96	15.76	15.42	71.95
1e-42	15.00	14.95	15.02	16.63	16.77	15.00	15.01	14.96	72.12
256	15.62	15.64	16.03	15.34	15.75	15.98	15.48	15.75	73.89
257	15.70	15.14	15.10	15.00	14.98	15.64	15.02	15.62	70.96
1e-320	71.05	252.34	252.56	253.37	73.30	72.84	252.22	252.95	72.38

Figure 7: Division timing for double precision floats on AMD Phenom II X2 550

Operand	Cycle count
0.0	25.02
1.0	24.96
1e10	24.99
1e+200	24.98
1e-300	25.01
1e-42	24.94
256	25.02
257	24.98
1e-320	88.02

Figure 8: Square root timing for double precision floats on AMD Phenom II X2 550

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	7.01	7.01	7.01	7.01	7.01	216.22	216.16	7.01	7.01
1.0	7.01	7.01	7.01	7.01	7.01	48.07	48.06	7.01	7.01
1e10	7.01	7.01	7.01	7.01	7.01	48.06	48.06	7.01	7.01
1e+30	7.01	7.01	7.01	7.01	7.01	48.06	48.06	7.01	7.01
1e-30	7.01	7.01	7.01	7.01	7.01	48.07	48.06	7.01	7.01
1e-41	216.17	48.05	48.05	48.06	48.06	216.20	216.17	48.05	48.05
1e-42	216.22	48.06	48.05	48.05	48.05	216.16	216.16	48.05	48.05
256	7.01	7.01	7.01	7.01	7.01	48.06	48.06	7.01	7.01
257	7.01	7.01	7.01	7.01	7.01	48.06	48.06	7.01	7.01

Figure 9: Addition timing for single precision floats on AMD Phenom II X2 550

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	7.01	7.01	7.01	7.02	7.01	48.09	48.09	7.01	7.01
1.0	7.02	7.01	7.01	7.01	7.02	217.22	217.01	7.01	7.01
1e10	7.01	7.01	7.01	7.01	7.01	48.06	48.06	7.01	7.01
1e+30	7.01	7.01	7.01	7.01	7.01	48.06	48.06	7.01	7.01
1e-30	7.01	7.01	7.01	7.01	176.93	216.99	217.01	7.01	7.01
1e-41	48.07	217.15	48.05	48.06	217.00	216.97	217.13	217.08	217.08
1e-42	48.06	217.03	48.20	48.07	217.04	216.99	217.01	216.98	217.00
256	7.01	7.01	7.01	7.01	7.01	217.07	217.01	7.01	7.01
257	7.01	7.01	7.01	7.01	7.01	216.97	217.06	7.01	7.01

Figure 10: Multiplication timing for single precision floats on AMD Phenom II X2 550

AMD Phenom II X2 550+FTZ/DAZ

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	8.70	8.83	7.21	7.40	7.38	7.15	7.46	7.92	7.04
1.0	7.14	7.27	7.19	7.58	7.54	7.74	7.77	7.51	7.23
1e10	6.97	6.96	6.99	6.89	6.98	6.93	6.97	6.97	7.00
1e+200	6.99	6.93	6.95	6.95	6.97	7.30	6.99	6.97	6.97
1e-300	6.97	6.99	7.01	6.97	6.94	6.96	6.93	6.94	6.91
1e-42	7.01	7.01	6.91	6.96	6.92	6.99	6.95	6.92	7.17
256	7.12	7.43	7.72	7.61	7.04	8.25	7.21	7.48	7.23
257	7.27	6.91	6.95	7.00	7.01	6.93	6.95	6.93	6.99
1e-320	6.88	6.97	7.00	6.97	6.98	6.97	6.97	6.97	6.92

Figure 11: Addition timing for double precision floats on AMD Phenom II X2 550+FTZ/DAZ

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	6.93	7.20	6.93	6.94	6.96	6.97	6.98	6.98	7.00
1.0	6.90	7.00	6.97	6.93	7.00	7.00	6.96	6.98	6.98
1e10	7.58	7.40	7.49	7.28	7.27	7.39	7.16	6.92	7.18
1e+200	7.45	7.73	7.80	7.14	7.42	7.28	7.59	7.42	7.13
1e-300	7.47	7.67	7.96	7.65	7.55	7.17	7.46	7.37	7.64
1e-42	7.77	7.88	7.68	7.91	7.46	7.84	7.64	8.18	7.75
256	7.09	7.35	7.21	7.27	6.97	7.65	7.37	7.56	7.29
257	7.24	7.42	7.82	7.51	7.30	7.76	7.53	7.55	7.73
1e-320	7.18	7.50	7.16	8.40	7.57	7.97	7.02	7.23	7.45

Figure 12: Subtraction timing for double precision floats on AMD Phenom II X2 550+FTZ/DAZ

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	8.51	8.21	7.01	7.01	7.01	7.01	7.01	7.61	7.31
1.0	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01
1e10	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01
1e+30	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01
1e-30	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01
1e-41	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01
1e-42	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01
256	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01
257	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01

Figure 13: Subtraction timing for single precision floats on AMD Phenom II X2 550+FTZ/DAZ

	Divisor								
Dividend	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	11.01	11.01	11.01	11.01	11.01	11.01	11.01	11.01	11.01
1.0	11.01	11.01	11.01	11.01	11.01	11.01	11.01	11.01	11.01
1e10	11.01	11.01	11.01	11.01	11.01	11.01	11.01	11.01	11.01
1e+30	11.01	11.01	11.01	11.01	11.01	11.01	11.01	11.01	11.01
1e-30	11.01	11.01	11.01	11.01	11.01	11.01	11.01	11.01	11.01
1e-41	11.01	11.01	11.01	11.01	11.01	11.01	11.01	11.01	11.01
1e-42	11.01	11.01	11.01	11.01	11.01	11.01	11.01	11.01	11.01
256	11.01	11.01	11.01	11.01	11.00	11.01	11.01	11.01	11.01
257	11.01	11.01	11.01	11.01	11.01	11.01	11.01	11.01	11.01

Figure 14: Division timing for single precision floats on AMD Phenom II X2 550+FTZ/DAZ

Operand	Cycle count
0.0	17.03
1.0	17.03
1e10	17.03
1e+30	17.03
1e-30	17.03
1e-41	17.03
1e-42	17.03
256	17.03
257	17.03

Figure 15: Square root timing for single precision floats on AMD Phenom II X2 550+FTZ/DAZ

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	7.79	6.91	7.10	7.33	7.55	7.59	7.30	7.16	7.03
1.0	7.43	7.43	7.26	7.42	7.17	7.28	7.74	7.12	7.13
1e10	7.16	7.60	7.03	7.01	7.20	7.10	7.10	7.16	7.25
1e+200	7.55	7.10	7.04	7.45	7.17	7.28	7.13	7.32	7.64
1e-300	6.94	6.98	7.00	6.95	6.98	6.97	6.97	6.94	6.99
1e-42	7.48	7.34	6.90	6.98	6.99	6.94	7.00	7.00	7.00
256	7.17	8.05	7.19	6.96	7.18	7.90	7.41	7.49	7.10
257	7.00	7.08	7.39	7.58	7.29	7.27	7.40	7.15	7.28
1e-320	7.10	7.08	6.92	6.88	6.94	7.20	7.03	7.22	6.96

Figure 16: Multiplication timing for double precision floats on AMD Phenom II X2 550+FTZ/DAZ

	Divisor								
Dividend	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	15.67	15.99	15.01	14.97	14.99	16.42	16.58	15.57	15.02
1.0	14.98	15.02	15.01	14.95	15.01	15.00	16.43	15.02	15.02
1e10	15.38	15.69	15.73	15.78	15.41	15.27	15.99	16.16	15.46
1e+200	15.22	14.98	14.92	16.27	14.95	15.06	15.16	14.98	15.16
1e-300	15.45	15.39	15.16	14.95	15.01	15.00	14.99	15.01	14.99
1e-42	15.29	15.52	15.12	15.27	15.30	15.33	15.17	15.15	15.14
256	14.98	15.02	15.85	16.12	15.63	15.25	15.97	16.18	16.08
257	15.57	16.35	15.83	15.22	15.19	14.93	15.60	15.00	15.00
1e-320	15.51	15.52	15.30	15.21	15.61	15.30	15.39	15.43	15.80

Figure 17: Division timing for double precision floats on AMD Phenom II X2 550+FTZ/DAZ

Operand	Cycle count
0.0	25.03
1.0	25.03
1e10	24.93
1e+200	24.99
1e-300	24.95
1e-42	24.89
256	24.95
257	24.96
1e-320	24.95

Figure 18: Square root timing for double precision floats on AMD Phenom II X2 550+FTZ/DAZ

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01
1.0	7.01	7.01	7.01	7.00	7.01	7.00	7.01	7.01	7.00
1e10	7.01	7.00	7.00	7.01	7.01	7.01	7.00	7.00	7.01
1e+30	7.00	7.00	7.01	7.00	7.00	7.00	7.00	7.00	7.00
1e-30	7.01	7.00	7.00	7.01	7.00	7.01	7.00	7.00	7.01
1e-41	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01
1e-42	7.00	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01
256	7.00	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01
257	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01

Figure 19: Addition timing for single precision floats on AMD Phenom II X2 550+FTZ/DAZ

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	8.21	7.61	7.01	7.01	7.01	7.01	7.01	7.01	7.01
1.0	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01
1e10	7.01	7.01	7.00	7.00	7.01	7.01	7.01	7.01	7.01
1e+30	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01
1e-30	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01
1e-41	7.01	7.01	7.01	7.01	7.01	7.31	7.07	7.01	7.01
1e-42	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01
256	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01
257	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.02

Figure 20: Multiplication timing for single precision floats on AMD Phenom II X2 550+FTZ/DAZ