

AMD Phenom II X6 1100T

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	183.85
1.0	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	37.48
1e10	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	37.48
1e+200	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	37.48
1e-300	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	37.49
1e-42	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	37.49
256	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	37.49
257	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	37.48
1e-320	183.86	37.49	37.49	37.48	37.48	37.48	37.49	37.49	183.86

Figure 1: Addition timing for double precision floats on AMD Phenom II X6 1100T

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	4.37	4.10	4.11	4.11	4.11	4.11	4.11	4.11	183.67
1.0	4.11	4.11	4.11	4.10	4.11	4.11	4.11	4.11	37.49
1e10	4.10	4.10	4.11	4.11	4.11	4.10	4.11	4.11	37.51
1e+200	4.10	4.11	4.11	4.11	4.11	4.11	4.11	4.11	37.48
1e-300	4.10	4.11	4.11	4.11	4.11	4.11	4.11	4.11	37.49
1e-42	4.11	4.11	4.11	4.11	4.11	4.11	4.10	4.11	37.49
256	4.11	4.10	4.11	4.11	4.10	4.11	4.10	4.11	37.48
257	4.10	4.11	4.11	4.11	4.11	4.11	4.11	4.10	37.49
1e-320	183.67	37.48	37.48	37.49	37.48	37.48	37.48	37.48	37.48

Figure 2: Subtraction timing for double precision floats on AMD Phenom II X6 1100T

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	5.53	5.27	5.27	5.27	5.27	185.10	185.15	5.27	5.27
1.0	5.27	5.27	5.27	5.27	5.27	38.38	38.38	5.26	5.27
1e10	5.00	5.00	5.00	5.00	5.00	38.38	38.38	5.00	5.00
1e+30	5.00	5.00	5.00	5.00	5.00	38.38	38.38	5.00	5.00
1e-30	5.00	5.00	5.00	5.00	5.00	38.38	38.38	5.00	5.00
1e-41	185.10	38.38	38.38	38.38	38.38	38.38	185.29	38.38	38.38
1e-42	185.11	38.37	38.37	38.38	38.38	185.10	38.38	38.38	38.37
256	5.27	5.27	5.27	5.26	5.27	38.38	38.38	5.27	5.27
257	5.27	5.27	5.27	5.27	5.27	38.38	38.38	5.27	5.27

Figure 3: Subtraction timing for single precision floats on AMD Phenom II X6 1100T

	Divisor								
Dividend	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	9.82	9.82	9.82	9.82	9.82	56.23	56.23	9.82	9.82
1.0	9.82	9.82	9.82	9.82	9.82	56.23	56.23	9.82	9.82
1e10	9.82	9.82	9.82	9.82	9.82	56.23	56.23	9.82	9.82
1e+30	9.82	9.82	9.82	9.82	9.82	56.23	56.23	9.82	9.82
1e-30	9.82	9.82	160.92	160.92	9.82	56.23	56.23	9.82	9.82
1e-41	56.23	207.35	207.33	207.33	56.23	56.23	56.23	207.33	207.33
1e-42	56.23	207.32	207.33	207.33	56.23	56.22	56.23	207.33	207.32
256	9.82	9.82	9.82	9.82	9.82	56.23	56.23	9.82	9.82
257	9.82	9.82	9.82	9.82	9.82	56.23	56.23	9.82	9.82

Figure 4: Division timing for single precision floats on AMD Phenom II X6 1100T

Operand	Cycle count
0.0	15.13
1.0	15.15
1e10	15.13
1e+30	15.10
1e-30	15.13
1e-41	64.24
1e-42	64.25
256	15.19
257	15.14

Figure 5: Square root timing for single precision floats on AMD Phenom II X6 1100T

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	4.37	4.37	4.10	4.11	4.11	4.35	4.37	4.38	37.48
1.0	4.11	4.11	4.11	4.11	4.11	4.11	4.10	4.11	183.67
1e10	4.11	4.10	4.10	4.11	4.10	4.11	4.11	4.10	183.68
1e+200	4.11	4.10	4.10	4.10	4.10	4.11	4.10	4.11	37.48
1e-300	4.10	4.11	4.11	4.11	145.12	145.12	4.11	4.10	183.68
1e-42	4.10	4.11	4.11	4.10	145.12	4.11	4.11	4.10	183.67
256	4.11	4.10	4.11	4.11	4.10	4.11	4.11	4.10	183.67
257	4.11	4.11	4.10	4.11	4.11	4.11	4.10	4.11	183.68
1e-320	37.49	183.68	183.67	37.49	183.68	183.67	183.67	183.68	183.68

Figure 6: Multiplication timing for double precision floats on AMD Phenom II X6 1100T

	Divisor								
Dividend	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39	63.37
1.0	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39	63.37
1e10	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39	63.37
1e+200	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39	63.37
1e-300	13.39	13.39	162.26	162.25	13.39	13.39	13.39	13.39	63.37
1e-42	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39	63.37
256	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39	63.37
257	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39	63.37
1e-320	63.37	213.21	212.95	212.95	63.37	63.37	213.23	212.97	63.37

Figure 7: Division timing for double precision floats on AMD Phenom II X6 1100T

Operand	Cycle count
0.0	22.31
1.0	22.31
1e10	22.31
1e+200	22.31
1e-300	22.31
1e-42	22.31
256	22.31
257	22.31
1e-320	78.54

Figure 8: Square root timing for double precision floats on AMD Phenom II X6 1100T

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	4.46	4.46	4.46	4.46	4.46	185.64	185.64	4.46	4.46
1.0	4.46	4.46	4.46	4.46	4.46	38.38	38.38	4.46	4.46
1e10	4.46	4.46	4.46	4.46	4.46	38.38	38.38	4.46	4.46
1e+30	4.46	4.46	4.46	4.46	4.46	38.38	38.38	4.46	4.46
1e-30	4.46	4.46	4.46	4.46	4.46	38.38	38.38	4.46	4.46
1e-41	185.64	38.38	38.38	38.38	38.38	185.63	185.64	38.38	38.38
1e-42	185.64	38.38	38.38	38.38	38.38	185.64	185.64	38.38	38.38
256	4.46	4.46	4.46	4.46	4.46	38.38	38.38	4.46	4.46
257	4.46	4.47	4.46	4.46	4.46	38.38	38.38	4.46	4.46

Figure 9: Addition timing for single precision floats on AMD Phenom II X6 1100T

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	5.54	5.53	5.53	5.53	5.53	38.38	38.38	5.53	5.53
1.0	5.53	5.53	5.27	5.26	5.53	184.92	184.92	5.53	5.53
1e10	5.00	5.00	5.00	5.00	5.00	38.38	38.38	5.00	5.00
1e+30	5.00	5.00	5.00	5.00	5.00	38.38	38.38	5.00	5.00
1e-30	5.00	5.02	5.00	5.00	146.73	185.29	185.30	5.00	5.00
1e-41	38.38	185.28	38.38	38.38	185.28	185.29	185.28	185.29	185.28
1e-42	38.38	185.12	38.38	38.38	185.28	185.28	185.29	185.10	185.27
256	5.27	5.27	5.27	5.26	5.26	185.10	185.10	5.27	5.27
257	5.26	5.27	5.26	5.27	5.27	185.11	185.10	5.27	5.27

Figure 10: Multiplication timing for single precision floats on AMD Phenom II X6 1100T

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	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57
1.0	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57
1e10	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57
1e+200	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57
1e-300	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57
1e-42	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57
256	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57
257	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57
1e-320	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57

Figure 11: Addition timing for double precision floats on AMD Phenom II X6 1100T+

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18
1.0	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.17	5.18
1e10	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18
1e+200	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18
1e-300	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18
1e-42	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18
256	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18
257	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18
1e-320	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18

Figure 12: Subtraction timing for double precision floats on AMD Phenom II X6 1100T+

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	5.80	5.80	5.80	5.80	5.80	5.80	5.80	5.80	5.80
1.0	5.80	5.80	5.53	5.53	5.53	5.53	5.80	5.80	5.80
1e10	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
1e+30	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
1e-30	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
1e-41	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
1e-42	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
256	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
257	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00

Figure 13: Subtraction timing for single precision floats on AMD Phenom II X6 1100T+

	Divisor								
Dividend	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82
1.0	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82
1e10	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82
1e+30	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82
1e-30	9.81	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82
1e-41	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82
1e-42	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82
256	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82
257	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82

Figure 14: Division timing for single precision floats on AMD Phenom II X6 1100T+

Operand	Cycle count
0.0	15.15
1.0	15.17
1e10	15.08
1e+30	15.14
1e-30	15.15
1e-41	15.14
1e-42	15.12
256	15.15
257	15.13

Figure 15: Square root timing for single precision floats on AMD Phenom II X6 1100T+

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	5.18	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91
1.0	4.91	4.91	4.92	4.91	4.91	4.91	4.91	4.91	4.91
1e10	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91
1e+200	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91
1e-300	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91
1e-42	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91
256	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91
257	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91
1e-320	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91

Figure 16: Multiplication timing for double precision floats on AMD Phenom II X6 1100T+

Dividend	Divisor								
	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	13.39	13.39	13.39	13.39	13.38	13.39	13.39	13.39	13.39
1.0	13.39	13.39	13.38	13.39	13.39	13.39	13.39	13.39	13.39
1e10	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39
1e+200	13.39	13.39	13.39	13.38	13.39	13.39	13.39	13.39	13.39
1e-300	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39
1e-42	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39
256	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39
257	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39
1e-320	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39

Figure 17: Division timing for double precision floats on AMD Phenom II X6 1100T+

Operand	Cycle count
0.0	22.31
1.0	22.31
1e10	22.31
1e+200	22.31
1e-300	22.31
1e-42	22.32
256	22.32
257	22.31
1e-320	22.31

Figure 18: Square root timing for double precision floats on AMD Phenom II X6 1100T+

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46
1.0	4.46	4.47	4.46	4.46	4.46	4.46	4.46	4.46	4.46
1e10	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46
1e+30	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.47
1e-30	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46
1e-41	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46
1e-42	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46
256	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46
257	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.47	4.46

Figure 19: Addition timing for single precision floats on AMD Phenom II X6 1100T+

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	6.07	5.76	5.00	5.00	5.27	5.27	5.27	5.27	5.27
1.0	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
1e10	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.74	4.73
1e+30	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73
1e-30	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73
1e-41	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73
1e-42	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73
256	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
257	5.00	5.00	4.73	4.73	5.00	5.00	5.00	5.00	5.00

Figure 20: Multiplication timing for single precision floats on AMD Phenom II X6 1100T+