

Intel Core2Duo E8400

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	7.01	7.01	7.01	7.01	7.01	7.01	7.03	7.01	170.24
1.0	7.01	7.01	7.06	7.01	7.01	7.01	7.01	7.01	170.31
1e10	7.01	7.01	7.06	7.01	7.01	7.01	7.02	7.08	170.39
1e+200	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	170.32
1e-300	7.01	7.01	7.07	7.01	7.01	7.01	7.01	7.01	170.27
1e-42	7.03	7.01	7.01	7.01	7.01	7.04	7.01	7.01	170.30
256	7.01	7.01	7.06	7.01	7.01	7.01	7.01	7.01	170.22
257	7.06	7.01	7.01	7.01	7.01	7.01	7.01	7.01	170.25
1e-320	170.22	170.24	170.26	170.34	170.22	170.29	170.25	170.32	170.22

Figure 1: Addition timing for double precision floats on Intel Core2Duo E8400

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	170.23
1.0	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	170.27
1e10	7.01	7.01	7.01	7.01	7.06	7.01	7.01	7.04	170.35
1e+200	7.01	7.01	7.01	7.02	7.01	7.01	7.01	7.01	170.33
1e-300	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	170.26
1e-42	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	170.24
256	7.01	7.01	7.01	7.01	7.02	7.07	7.01	7.01	170.23
257	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	170.27
1e-320	170.26	170.23	170.21	170.39	170.27	170.28	170.21	170.36	170.27

Figure 2: Subtraction timing for double precision floats on Intel Core2Duo E8400

	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	170.29	170.27	7.01	7.01
1.0	7.01	7.01	7.01	7.06	7.01	170.31	170.28	7.01	7.01
1e10	7.01	7.01	7.01	7.01	7.01	170.34	170.28	7.01	7.01
1e+30	7.01	7.01	7.01	7.01	7.01	170.24	170.24	7.01	7.01
1e-30	7.02	6.99	7.01	7.01	7.01	170.21	170.29	7.02	7.07
1e-41	170.28	170.28	170.27	170.26	170.28	170.21	170.25	170.40	170.29
1e-42	170.27	170.25	170.36	170.28	170.23	170.24	170.26	170.24	170.28
256	7.01	7.01	7.06	7.04	7.01	170.41	170.29	7.01	7.01
257	7.01	7.03	7.01	7.01	7.01	170.21	170.32	7.01	7.01

Figure 3: Subtraction timing for single precision floats on Intel Core2Duo E8400

	Divisor								
Dividend	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	171.27	171.26	7.01	6.99
1.0	7.01	7.01	11.01	11.01	11.01	172.25	172.30	7.01	11.01
1e10	7.01	7.01	11.04	11.01	11.03	172.37	172.31	7.01	11.01
1e+30	7.01	7.01	11.01	11.01	11.01	172.35	172.34	7.01	11.01
1e-30	7.01	7.01	189.29	189.33	11.03	172.28	172.30	7.01	11.01
1e-41	7.01	171.22	172.30	172.46	172.27	172.28	172.43	171.27	172.28
1e-42	7.01	171.33	172.28	172.26	172.30	172.29	172.31	171.34	172.34
256	7.01	7.01	11.01	11.01	11.04	172.29	172.32	7.01	11.02
257	7.01	7.01	11.01	11.01	11.01	172.41	172.30	7.01	11.01

Figure 4: Division timing for single precision floats on Intel Core2Duo E8400

Operand	Cycle count
0.0	7.01
1.0	7.01
1e10	12.01
1e+30	12.01
1e-30	12.01
1e-41	170.26
1e-42	170.26
256	7.01
257	12.02

Figure 5: Square root timing for single precision floats on Intel Core2Duo E8400

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	171.27
1.0	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	171.27
1e10	7.01	7.01	7.04	7.01	7.01	7.01	7.01	7.01	171.31
1e+200	7.01	7.03	7.01	7.01	7.01	7.01	7.01	7.01	171.26
1e-300	7.01	7.01	7.01	7.01	181.29	181.29	7.06	7.01	171.30
1e-42	7.01	7.01	7.01	7.01	181.33	7.01	7.01	7.01	171.22
256	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	171.25
257	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	171.27
1e-320	171.22	171.22	171.32	171.36	171.34	171.30	171.30	171.23	171.31

Figure 6: Multiplication timing for double precision floats on Intel Core2Duo E8400

	Divisor								
Dividend	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	7.01	7.01	7.01	7.01	7.01	7.01	7.01	7.01	172.31
1.0	7.01	7.01	19.02	19.02	19.03	19.06	7.01	19.02	181.26
1e10	7.01	7.01	19.02	19.06	19.03	19.02	7.01	19.02	181.23
1e+200	7.01	7.01	19.02	19.03	19.02	19.02	7.01	19.02	181.33
1e-300	7.01	7.01	206.31	206.37	19.02	19.02	7.01	19.02	181.23
1e-42	7.01	7.01	19.02	19.02	19.03	19.02	7.01	19.02	181.23
256	7.01	7.01	19.03	19.02	19.04	19.02	7.01	19.09	181.24
257	7.01	7.01	19.02	19.02	19.02	19.02	7.01	19.02	181.32
1e-320	7.01	172.22	181.24	181.34	181.23	181.25	172.33	181.34	181.26

Figure 7: Division timing for double precision floats on Intel Core2Duo E8400

Operand	Cycle count
0.0	7.01
1.0	7.01
1e10	19.02
1e+200	19.02
1e-300	19.02
1e-42	19.02
256	7.06
257	19.03
1e-320	177.25

Figure 8: Square root timing for double precision floats on Intel Core2Duo E8400

	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	170.38	170.30	7.01	7.01
1.0	7.01	7.01	7.01	7.01	7.01	170.26	170.31	7.01	7.01
1e10	7.01	7.01	7.01	7.01	7.06	170.37	170.27	7.04	7.01
1e+30	7.01	7.01	7.01	7.01	7.01	170.21	170.21	7.01	7.01
1e-30	7.01	7.03	7.01	7.01	7.01	170.29	170.31	7.01	7.01
1e-41	170.21	170.26	170.25	170.23	170.27	170.23	170.22	170.29	170.20
1e-42	170.25	170.26	170.22	170.21	170.28	170.30	170.26	170.23	170.24
256	7.01	7.04	7.01	7.01	7.01	170.26	170.30	7.01	7.01
257	7.01	7.01	7.01	7.01	7.01	170.21	170.21	7.01	7.01

Figure 9: Addition timing for single precision floats on Intel Core2Duo E8400

	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	168.31	168.26	7.01	7.01
1.0	7.01	7.01	7.01	7.01	7.01	168.28	168.24	7.01	7.01
1e10	7.01	7.04	7.01	7.04	7.01	168.21	168.21	7.01	7.01
1e+30	7.01	7.04	7.01	7.06	7.01	168.27	168.32	7.01	7.01
1e-30	7.01	7.01	7.01	7.01	178.24	168.29	168.31	7.01	7.01
1e-41	168.36	168.39	168.29	168.24	168.26	168.25	168.27	168.27	168.34
1e-42	168.27	168.37	168.30	168.36	168.29	168.26	168.21	168.29	168.32
256	7.01	6.96	7.01	7.01	7.01	168.30	168.27	7.01	7.01
257	7.01	7.01	7.01	7.01	7.01	168.29	168.26	7.01	7.01

Figure 10: Multiplication timing for single precision floats on Intel Core2Duo E8400

Intel Core2Duo E8400+FTZ/DAZ

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1.0	7.11	7.11	7.11	7.13	7.11	7.11	7.10	7.11	7.11
1e10	7.11	7.11	7.11	7.11	7.12	7.11	7.11	7.11	7.11
1e+200	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e-300	7.13	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e-42	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
256	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
257	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e-320	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11

Figure 11: Addition timing for double precision floats on Intel Core2Duo E8400+FTZ/DAZ

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.12	7.11
1.0	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e10	7.11	7.11	7.10	7.12	7.11	7.11	7.11	7.11	7.11
1e+200	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e-300	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e-42	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
256	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
257	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e-320	7.16	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11

Figure 12: Subtraction timing for double precision floats on Intel Core2Duo E8400+FTZ/DAZ

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	7.11	7.11	7.11	7.11	7.11	7.11	7.09	7.11	7.11
1.0	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e10	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e+30	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e-30	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e-41	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e-42	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
256	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
257	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11

Figure 13: Subtraction timing for single precision floats on Intel Core2Duo E8400+FTZ/DAZ

	Divisor								
Dividend	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1.0	7.11	7.11	11.01	11.01	11.01	7.11	7.11	7.11	11.01
1e10	7.11	7.11	11.01	11.01	11.01	7.11	7.11	7.11	11.01
1e+30	7.11	7.11	11.01	11.01	11.02	7.11	7.11	7.11	11.01
1e-30	7.11	7.11	11.02	11.01	11.01	7.11	7.11	7.11	11.01
1e-41	7.12	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e-42	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
256	7.11	7.11	11.01	11.01	11.01	7.11	7.11	7.11	11.03
257	7.11	7.11	11.02	11.01	11.01	7.11	7.11	7.11	11.01

Figure 14: Division timing for single precision floats on Intel Core2Duo E8400+FTZ/DAZ

Operand	Cycle count
0.0	7.01
1.0	7.01
1e10	12.01
1e+30	12.01
1e-30	12.02
1e-41	7.01
1e-42	7.01
256	7.01
257	12.01

Figure 15: Square root timing for single precision floats on Intel Core2Duo E8400+FTZ/DAZ

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1.0	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e10	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e+200	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.10
1e-300	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e-42	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.13	7.11
256	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
257	7.11	7.11	7.11	7.11	7.11	7.14	7.11	7.12	7.11
1e-320	7.11	7.11	7.12	7.12	7.11	7.11	7.11	7.11	7.13

Figure 16: Multiplication timing for double precision floats on Intel Core2Duo E8400+FTZ/DAZ

	Divisor								
Dividend	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1.0	7.11	7.11	19.02	19.02	19.02	19.02	7.11	19.03	7.11
1e10	7.11	7.11	19.02	19.02	19.02	19.02	7.11	19.02	7.11
1e+200	7.11	7.11	19.02	19.03	19.03	19.02	7.11	19.02	7.11
1e-300	7.12	7.11	19.02	19.03	19.03	19.02	7.11	19.02	7.11
1e-42	7.11	7.11	19.03	19.02	19.04	19.02	7.11	19.04	7.11
256	7.11	7.11	19.09	19.02	19.02	19.02	7.11	19.02	7.11
257	7.11	7.11	19.03	19.02	19.03	19.02	7.11	19.02	7.11
1e-320	7.11	7.11	7.11	7.11	7.11	7.12	7.11	7.14	7.11

Figure 17: Division timing for double precision floats on Intel Core2Duo E8400+FTZ/DAZ

Operand	Cycle count
0.0	7.01
1.0	7.01
1e10	19.03
1e+200	19.02
1e-300	19.02
1e-42	19.03
256	7.01
257	19.02
1e-320	7.01

Figure 18: Square root timing for double precision floats on Intel Core2Duo E8400+FTZ/DAZ

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1.0	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e10	7.12	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e+30	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e-30	7.11	7.11	7.11	7.11	7.11	7.11	7.12	7.11	7.11
1e-41	7.12	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e-42	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
256	7.12	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
257	7.11	7.11	7.11	7.11	7.11	7.11	7.12	7.11	7.11

Figure 19: Addition timing for single precision floats on Intel Core2Duo E8400+FTZ/DAZ

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1.0	7.11	7.12	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e10	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e+30	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e-30	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e-41	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
1e-42	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
256	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
257	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11

Figure 20: Multiplication timing for single precision floats on Intel Core2Duo E8400+FTZ/DAZ