

Intel Core2 T7200

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	7.02	7.02	7.02	7.03	7.02	7.03	7.02	7.02	164.40
1.0	7.02	7.02	7.02	7.02	7.02	7.01	7.02	7.02	164.41
1e10	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	164.40
1e+200	7.02	7.02	7.03	7.01	7.02	7.02	7.02	7.02	164.39
1e-300	7.02	7.02	7.02	7.02	7.03	7.02	7.02	7.02	164.38
1e-42	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	164.41
256	7.02	7.02	7.02	7.01	7.02	7.02	7.02	7.02	164.42
257	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	164.41
1e-320	164.39	164.41	164.39	164.39	164.40	164.41	164.40	164.41	164.42

Figure 1: Addition timing for double precision floats on Intel Core2 T7200

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	164.40
1.0	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	164.40
1e10	7.02	7.02	7.02	7.02	7.01	7.02	7.02	7.02	164.39
1e+200	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	164.39
1e-300	7.02	7.01	7.02	7.02	7.02	7.02	7.02	7.02	164.46
1e-42	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	164.42
256	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	164.41
257	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	164.43
1e-320	164.40	164.41	164.40	164.40	164.39	164.39	164.40	164.41	164.42

Figure 2: Subtraction timing for double precision floats on Intel Core2 T7200

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	8.02	8.03	8.02	8.02	8.02	163.40	163.41	8.02	8.03
1.0	8.03	8.02	8.02	8.02	8.02	163.41	163.40	8.02	8.03
1e10	8.02	8.03	8.02	8.02	8.02	163.42	163.40	8.02	8.03
1e+30	8.02	8.02	8.02	8.02	8.02	163.40	163.43	8.02	8.02
1e-30	8.02	8.02	8.02	8.02	8.02	163.43	163.41	8.02	8.02
1e-41	163.40	163.43	163.40	163.40	163.43	163.40	163.40	163.40	163.43
1e-42	163.41	163.40	163.42	163.42	163.39	163.42	163.43	163.41	163.39
256	8.02	8.02	8.02	8.02	8.02	163.41	163.40	8.02	8.02
257	8.02	8.02	8.02	8.02	8.02	163.43	163.41	8.02	8.02

Figure 3: Subtraction timing for single precision floats on Intel Core2 T7200

	Divisor								
Dividend	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	8.02	8.02	8.02	8.02	8.02	163.39	163.41	8.02	8.02
1.0	8.03	8.02	16.04	16.04	16.04	172.42	172.41	8.02	16.04
1e10	8.02	8.02	16.05	16.04	16.04	172.42	172.42	8.02	16.03
1e+30	8.02	8.02	16.05	16.04	16.04	172.41	172.43	8.02	16.04
1e-30	8.02	8.02	194.50	194.50	16.04	172.42	172.41	8.02	16.04
1e-41	8.02	163.42	172.41	172.44	172.44	172.42	172.43	163.40	172.43
1e-42	8.02	163.41	172.42	172.42	172.44	172.42	172.42	163.40	172.43
256	8.02	8.02	16.04	16.05	16.04	172.44	172.42	8.02	16.04
257	8.02	8.02	16.04	16.04	16.04	172.44	172.43	8.02	16.04

Figure 4: Division timing for single precision floats on Intel Core2 T7200

Operand	Cycle count
0.0	8.02
1.0	8.02
1e10	28.07
1e+30	28.09
1e-30	28.07
1e-41	182.47
1e-42	182.47
256	8.02
257	28.07

Figure 5: Square root timing for single precision floats on Intel Core2 T7200

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	163.39
1.0	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.03	163.39
1e10	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	163.40
1e+200	7.02	7.02	7.01	7.02	7.02	7.02	7.02	7.02	163.41
1e-300	7.02	7.02	7.02	7.03	173.43	173.48	7.02	7.02	163.42
1e-42	7.02	7.03	7.02	7.02	173.42	7.02	7.02	7.03	163.42
256	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	163.41
257	7.03	7.02	7.02	7.02	7.02	7.02	7.02	7.02	163.41
1e-320	163.42	163.40	163.42	163.42	163.40	163.40	163.42	163.40	163.40

Figure 6: Multiplication timing for double precision floats on Intel Core2 T7200

	Divisor								
Dividend	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	7.02	7.02	7.02	7.02	7.02	7.02	7.03	7.02	164.52
1.0	7.03	7.02	30.07	30.07	30.07	30.07	7.02	30.07	186.55
1e10	7.02	7.02	30.07	30.08	30.07	30.07	7.02	30.08	186.57
1e+200	7.02	7.02	30.07	30.08	30.07	30.07	7.02	30.07	186.58
1e-300	7.02	7.02	222.64	222.65	30.07	30.07	7.02	30.08	186.56
1e-42	7.02	7.02	30.09	30.09	30.08	30.07	7.02	30.07	186.57
256	7.02	7.02	30.09	30.09	30.08	30.08	7.03	30.07	186.56
257	7.02	7.02	30.09	30.09	30.08	30.08	7.02	30.07	186.57
1e-320	7.02	164.52	186.57	186.58	186.57	186.57	164.52	186.57	186.55

Figure 7: Division timing for double precision floats on Intel Core2 T7200

Operand	Cycle count
0.0	7.02
1.0	7.02
1e10	57.15
1e+200	57.14
1e-300	57.14
1e-42	57.14
256	7.02
257	57.15
1e-320	209.55

Figure 8: Square root timing for double precision floats on Intel Core2 T7200

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	8.02	8.02	8.02	8.02	8.02	163.44	163.42	8.02	8.02
1.0	8.02	8.02	8.02	8.02	8.03	163.45	163.43	8.02	8.02
1e10	8.02	8.02	8.02	8.04	8.02	163.41	163.42	8.02	8.02
1e+30	8.02	8.02	8.02	8.02	8.02	163.42	163.40	8.02	8.02
1e-30	8.02	8.02	8.02	8.02	8.02	163.40	163.41	8.02	8.02
1e-41	163.43	163.40	163.43	163.41	163.40	163.43	163.41	163.43	163.40
1e-42	163.41	163.43	163.41	163.40	163.48	163.42	163.41	163.41	163.44
256	8.02	8.02	8.03	8.02	8.02	163.44	163.41	8.02	8.02
257	8.02	8.02	8.03	8.02	8.02	163.40	163.43	8.02	8.02

Figure 9: Addition timing for single precision floats on Intel Core2 T7200

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	8.02	8.02	8.02	8.02	8.02	161.41	161.41	8.02	8.02
1.0	8.02	8.02	8.02	8.02	8.02	161.39	161.40	8.02	8.02
1e10	8.02	8.02	8.02	8.02	8.02	161.40	161.40	8.02	8.02
1e+30	8.02	8.01	8.02	8.02	8.02	161.39	161.38	8.02	8.02
1e-30	8.02	8.03	8.02	8.03	171.40	161.42	161.39	8.02	8.02
1e-41	161.38	161.40	161.38	161.41	161.40	161.38	161.41	161.38	161.41
1e-42	161.41	161.40	161.47	161.39	161.39	161.42	161.40	161.41	161.38
256	8.02	8.02	8.02	8.02	8.03	161.39	161.42	8.02	8.02
257	8.06	8.02	8.02	8.02	8.02	161.40	161.39	8.02	8.02

Figure 10: Multiplication timing for single precision floats on Intel Core2 T7200

Intel Core2 T7200+FTZ/DAZ

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

Figure 11: Addition timing for double precision floats on Intel Core2 T7200+FTZ/DAZ

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	7.11	7.12	7.12	7.12	7.12	7.12	7.13	7.12	7.12
1.0	7.14	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12
1e10	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12
1e+200	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12
1e-300	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12
1e-42	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12
256	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12
257	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12
1e-320	7.11	7.12	7.12	7.12	7.12	7.12	7.12	7.23	7.12

Figure 12: Subtraction timing for double precision floats on Intel Core2 T7200+FTZ/DAZ

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	8.02	8.02	8.03	8.02	8.03	8.02	8.02	8.02	8.03
1.0	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02
1e10	8.02	8.02	8.02	8.03	8.02	8.02	8.02	8.02	8.02
1e+30	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.03
1e-30	8.02	8.02	8.01	8.02	8.02	8.02	8.02	8.02	8.02
1e-41	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02
1e-42	8.02	8.02	8.03	8.02	8.03	8.02	8.02	8.02	8.03
256	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.03
257	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02

Figure 13: Subtraction timing for single precision floats on Intel Core2 T7200+FTZ/DAZ

	Divisor								
Dividend	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>
1.0	<b>8.62</b>	<b>8.62</b>	16.05	16.04	16.04	<b>8.62</b>	<b>8.62</b>	<b>8.63</b>	16.04
1e10	<b>8.62</b>	<b>8.62</b>	16.04	16.04	16.04	<b>8.62</b>	<b>8.63</b>	<b>8.62</b>	16.04
1e+30	<b>8.62</b>	<b>8.62</b>	16.04	16.04	16.04	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>	16.04
1e-30	<b>8.62</b>	<b>8.63</b>	16.04	16.04	16.04	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>	16.04
1e-41	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>	<b>8.63</b>	<b>8.62</b>	<b>8.62</b>
1e-42	<b>8.63</b>	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>	<b>8.63</b>	<b>8.62</b>
256	<b>8.62</b>	<b>8.62</b>	16.04	16.04	16.04	<b>8.62</b>	<b>8.62</b>	<b>8.62</b>	16.04
257	<b>8.62</b>	<b>8.62</b>	16.04	16.04	16.04	<b>8.62</b>	<b>8.63</b>	<b>8.62</b>	16.04

Figure 14: Division timing for single precision floats on Intel Core2 T7200+FTZ/DAZ

Operand	Cycle count
0.0	8.03
1.0	8.02
1e10	28.07
1e+30	28.07
1e-30	28.07
1e-41	8.02
1e-42	8.02
256	8.02
257	28.07

Figure 15: Square root timing for single precision floats on Intel Core2 T7200+FTZ/DAZ

	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.83</b>	<b>7.82</b>	<b>7.82</b>	<b>7.83</b>	<b>7.82</b>
1.0	<b>7.82</b>	<b>7.82</b>	<b>7.83</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.83</b>	<b>7.83</b>	<b>7.82</b>
1e10	<b>7.82</b>	<b>7.82</b>	<b>7.83</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.83</b>
1e+200	<b>7.82</b>	<b>7.83</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.83</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>
1e-300	<b>7.81</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>
1e-42	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>
256	<b>7.82</b>	<b>7.83</b>	<b>7.83</b>	<b>7.82</b>	<b>7.82</b>	<b>7.83</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>
257	<b>7.82</b>	<b>7.82</b>	<b>7.83</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.81</b>	<b>7.82</b>
1e-320	<b>7.82</b>	<b>7.82</b>	<b>7.83</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>	<b>7.82</b>

Figure 16: Multiplication timing for double precision floats on Intel Core2 T7200+FTZ/DAZ

Dividend	Divisor								
	0.0	1.0	1e10	1e+200	1e-300	1e-42	256	257	1e-320
	Cycle count								
0.0	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12
1.0	7.12	7.12	30.07	30.08	30.08	30.08	7.12	30.07	7.13
1e10	7.12	7.12	30.07	30.08	30.07	30.07	7.11	30.07	7.12
1e+200	7.12	7.12	30.07	30.07	30.08	30.08	7.12	30.08	7.12
1e-300	7.12	7.12	30.07	30.07	30.07	30.07	7.12	30.08	7.11
1e-42	7.12	7.12	30.07	30.08	30.07	30.08	7.12	30.07	7.12
256	7.12	7.12	30.07	30.07	30.07	30.08	7.12	30.07	7.12
257	7.12	7.12	30.07	30.07	30.08	30.07	7.12	30.08	7.12
1e-320	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12

Figure 17: Division timing for double precision floats on Intel Core2 T7200+FTZ/DAZ

Operand	Cycle count
0.0	7.02
1.0	7.01
1e10	57.14
1e+200	57.15
1e-300	57.14
1e-42	57.14
256	7.04
257	57.15
1e-320	7.02

Figure 18: Square root timing for double precision floats on Intel Core2 T7200+FTZ/DAZ

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	8.02	8.03	8.02	8.02	8.02	8.02	8.02	8.02	8.03
1.0	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.03	8.02
1e10	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02
1e+30	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.03
1e-30	8.02	8.02	8.03	8.02	8.02	8.02	8.02	8.02	8.02
1e-41	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02
1e-42	8.02	8.01	8.02	8.02	8.02	8.02	8.02	8.02	8.03
256	8.02	8.02	8.02	8.01	8.02	8.02	8.02	8.02	8.02
257	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02

Figure 19: Addition timing for single precision floats on Intel Core2 T7200+FTZ/DAZ

	0.0	1.0	1e10	1e+30	1e-30	1e-41	1e-42	256	257
	Cycle count								
0.0	8.02	8.02	8.03	8.02	8.03	8.02	8.02	8.02	8.02
1.0	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02
1e10	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02
1e+30	8.02	8.02	8.02	8.02	8.03	8.02	8.02	8.02	8.02
1e-30	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.03	8.02
1e-41	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02
1e-42	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02
256	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.03
257	8.02	8.02	8.02	8.03	8.02	8.02	8.02	8.02	8.02

Figure 20: Multiplication timing for single precision floats on Intel Core2 T7200+FTZ/DAZ