Data Tables:

F.1 Experimental Data (Binary Adder-Subtractor):

Operation	M	A	B	C4	S4 S3 S2 S1
7 + 5	0	0111	0101	0	1100
4 + 6	0	0100	0110	0	1010
9 + 11	0	1001	1011	1	0100
15 + 15	0	1111	1111	1	1110
7 − 5	1	0111	0101	1	0010
4 − 6	1	0100	0110	1	1110
11 − 2	1	1011	0010	1	1001
15 − 15	1	1111	1111	1	0001

Operation	A	B	Overflow Carry	Sum
7 + 5				
18 + 19				
72 + 83				
129 + 255				

Table F.2.1

F.3 Experimental Data (BCD Adder):

Decimal Value	Binary Sum					BCD SUM				
	K	Z_3	Z_2	Z_1	Z_0	C	S_3	S_2	S_1	S_0
0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	1	0	0	0	0	1
2	0	0	0	1	0	0	0	0	1	0
3	0	0	0	1	1	0	0	0	1	1
4	0	0	1	0	0	0	0	1	0	0
5	0	0	1	0	1	0	0	1	0	1
6	0	0	1	1	0	0	0	1	1	0
7	0	0	1	1	1	0	0	1	1	1
8	0	1	0	0	0	0	1	0	0	0
9	0	1	0	0	1	0	1	0	0	1
10	0	1	0	1	0	1	0	0	0	0
11	0	1	0	1	1	1	0	0	0	1
12	0	1	1	0	0	1	0	0	1	0
13	0	1	1	0	1	1	0	0	1	1
14	0	1	1	1	0	1	0	1	0	0
15	0	1	1	1	1	1	0	1	0	1
16	1	0	0	0	0	1	0	1	1	0
17	1	0	0	0	1	1	0	1	1	1
18	1	0	0	1	0	1	1	0	0	0
19	1	0	0	1	1	1	1	0	0	1

Table F.3.1

Operation	A (In Binary)	B (In Binary)	Overflow Carry	Sum (In Binary)	SUM (Decimal)
9 + 0	1001	0000	0	1001	9
9 + 1	1001	0001	1	0000	0
9 + 2	1001	0010	1	0001	1
9 + 3	1001	0011	1	0010	2
9 + 4	1001	0100	1	0011	3
9 + 5	1001	0101	1	0100	4
9 + 6	1001	0110	1	0101	5
9 + 7	1001	0111	1	0110	6
9 + 8	1001	1000	1	0111	7
9 + 9	1001	1001	1	1000	8

Table F.3.2