

Table 1.5 Hexadecimal Arithmetic

(a) Addition																
+	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
2	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
3	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
4	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
5	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
6	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
7	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
8	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
9	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
A	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
B	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
C	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
D	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
E	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
F	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F

(b) Multiplication																
×	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Example 1.27: Addition

Scratchpad	Decimal
1 1	C = 12
1 5 F C	D = 13
+ 2 4 5 D	
3 A 5 9	
16 25 = (19) <sub>16</sub> ← This can be obtained directly from Table 1.5.	
16 1 9	
0 1	

Decimal
1 = 1
F = 15
5 = 5
21 = (15) <sub>16</sub>

Example 1.28: Subtraction

Scratchpad	Decimal
1 13 15	(15) <sub>16</sub> = 21
3 4 5 D	minuend
- 1 5 F C	subtrahend
0 E 6 1	difference
(F) <sub>16</sub> = -15	6 = (6) <sub>16</sub>
(13) <sub>16</sub> = 19	
- (5) <sub>16</sub> = -5	
14 = (E) <sub>16</sub>	

Example 1.29: Multiplication

Scratchpad	Decimal	Hexadecimal
1 E 4 A	A × 2 = 20	= 14
3	4 × 2 = 8	= 08
0 3 C 9 4	E × 2 = 28	= 1C
+ 1 2 E E 4	1 × 2 = 2	= 02
+ 1 C 6 5 6		
1 D 9 8 0 D 4		
	A × A = 100	= 64
	4 × A = 40	= 28
	E × A = 140	= 8C
	1 × A = 10	= 0A
		12EE4 = P <sub>2</sub>