ASCII / Images

Write the word "Elf" in binary encoded ASCII. Look up letters from web (CS160Reader Ch 5.9) make sure to pay attention to capital vs. lower case letters:

E l f

01000101 01101100 01100110

Hex practice

Convert Binary → Hex

1011 10001111 0011110000001110

B 8F 3C0E

Binary	Hex
0000	0
0001	1
0010	2
0011	3
0100	4
0101	5
0110	6
0111	7
1000	8
1001	9
1010	A
1011	B
1100	C
1101	D
1110	E
1111	F

Convert Hex → Binary

62 FF A0

6 2 F F A 0

0110 0010 1111 1111 1010 0000

Convert the following Hex numbers to Decimal:

2E 15 3F6

2×16+14 1×16+5 3×256+15×16+6

46 21 1014

4096	256	16	1
		2	14
		1	5
	3	15	6

128	64	32	16	8	4	2	1

Fill out the table by filling in missing blanks:

Decimal	Binary (use 8 digits)	Hex (use two digits)
63	00111111	3F
41	00101001	29
76	0100 1100	4C

Break these hex color codes into their component parts and write each as a decimal number. Then describe the color.

Hex: FFFFB9 Red: (FF) 255 Green: (FF) 255 Blue: (B9) 185

Description: Pale Yellow

Hex: E96519 Red: (E9) 233 Green: (65) 101 Blue: (19) 25

Description: Orange

Add these binary numbers. Check your work by converting the starting values and answers to decimal:

1010	0011	0111
0001	1001	1010
1011	1100	10001
(10 + 1 = 11)	(3 + 9 = 12)	(7 + 10 = 17)

Which problems would have overflow errors if we could only use 4 bits?

Need 5 bits for 17!

Multiply the following binary numbers. Check your work by converting the starting values and answers to decimal:

0011	0101
0010	1001
0000	0101
0011	0000
0000	0000
0000	0101
000110	0101101
(3 × 2 = 6)	(5 × 9 = 45)