HomeWork 1

Number Conversion

1) Fill in the table below

Binary	Octal	Decimal	Hexadecimal
11 1111 1111			
	1111		
		1111	
			0x1111

Binary Operations

2)complete the operation,please answer in the octal

0x111 + _____ = $(1111\ 0011\ 1111)_2$

_____ * $(1011\ 0000)_2$ = 0x18c0

3)Assume we are running on an 8-bit machine using two's complement for signed integers, An"int" is encoded using 8 bits.

Question: Please print the c value and explain the reason.

Unsigned int a = 34,b=210,c;

c = a + b;

4)Given 8-bit wide A and B with hexadecimal expression 0xB3 and 0x2C respectively. Calcute the values of the following expressions, please answer in the hexadecimal.

A) A&B

B) A && B

C) A | B

D) A || B

E) A ^ B

F) ~A | ~B

5)Fill in the table below with the results of shift operation given below(Assume X is 8-bit wide).Please answer in the hexadcimal.

X	X<<2	X>>3(logical)	X>>4(Arithmetic)
0xA4			
0xCE			
0xB9			
0x0E			