HW#1 Solution

Q1:

A = 001110

2'S compA = 110010

B = 011000

2'S Comp B = 101000

A A + B

```
 1 1
  001110
  011000
 [1]001010
discard
```

B

```
 1 0
  001110
  101000
 [1]011010
overflow
```

final answe = (-) 100110

Q2:

(a) $(5617)_8 \rightarrow (101110001111)_2$

(b) $(1FC.AB)_{16} \rightarrow (000111111100.1010\ 1011)_2$

(c) $(43.25)_{10} \rightarrow (101011.01)_2$

2	43

0.25 X 2 = ↓0.5

0.5 X 2 = 1.0

d $(AB22.A2)_{16} \rightarrow (1010101100100010.10100010)_2$

$\rightarrow (125442.504)_8$

Q3:

```
   1
+ 234
  916
------
 1150
```

BCD

```
          0010   0011   0100
          1001   0001   0110
          ----   ----   ----
          1011   0100   1010
           110           110
          ----   ----   ----
   1      0001   0101   0000
   1         1      5      0
```

Q4 16's Comp of AF3F

15's Comp = FFFF − AF3F

```
  FFFF
- AF3F
------
  50C0
```

16's Comp = 15's Comp + 1

```
+ 50C0
     1
------
  50C1
```

Q5: 5712 → 1011 1101 0001 0010

base 10	2421 Code
0	0000
1	0001
2	0010
3	0011
4	0100
5	1011
6	1100
7	1101
8	1110
9	1111