ICS'13 Homework 8

Problem1: Float Point

Translate decimal number into binary:

1.25	1.01
2.75	
15.5	
13.625	
50.125	

Problem2: IA-64

Read the assembly code, Write down the value that function "int foo()" returned.

```
foo:
        pushq   %rbp
        movq    %rsp, %rbp
        movl    $3, -16(%rbp)
        movl    $4, -12(%rbp)
        movl    $0, -8(%rbp)
        movl    $1, -4(%rbp)
        jmp     .L2
.L3:
        movl    -4(%rbp), %eax
        imull   -16(%rbp), %eax
        movl    %eax, -4(%rbp)
        addl    $1, -8(%rbp)
.L2:
        movl    -8(%rbp), %eax
        cmpl    -12(%rbp), %eax
        jl      .L3
        movl    -4(%rbp), %eax
        leave
        ret
```

Returned value=_____

Problem 3: Y86

Write down the byte codes of the following Y86 instructions

Y86 Instructions	Byte Codes
rrmovl %ebx,%ecx	
jmp 0xabc	
addl %ebx,%eax	

call 0x1234	
rmmovl %ecx,0x40(%ebx)	
je 0x280	
pushl %eax	

Problem 4: Y86

We now have a piece of Y86 code, tell the value of %eax when the program ends, and give a description about what the program has done.

```
0x000:
0x000: 308400020000
0x006: 308500020000
0x00c: 7058000000
0x011:
0x011: a058
0x013: 2045
0x015: a008
0x017: a018
0x019: 308102000000
0x01f: 6110
0x021: 7631000000
0x026: 308001000000
```

0x02c: 7051000000

0x031:

0x031: 8011000000

0x036: a028

0x038: 2002

0x03a: 5005fcffffff

0x040: 308101000000

0x046: 6110

0x048: 8011000000

0x04d: 6020

0x04f: b028

0x051:

0x051: b018

0x053: b058

0x055: b058

0x057: 90

0x058:

0x058: 308007000000

0x05e: 8011000000

0x063: 10

0x200:

0x200: