Section 4

1. What does the following code do?

```assembly
    iii)       movl (%rdi), %eax
              leal (%eax,%eax,2), %eax
              addl %eax, %eax
              andl %esi, %eax
              subl %esi, %eax
              ret
```

(14au midterm)

2. True or false?
   a) A logical shift of a 2s-complement number by 3 bits to the right (>> 3) is the same as dividing by 8.
   b) On x86-64, casting a C float to double has no precision loss.
   c) A 4-byte integer can be moved into a 32-bit register using a movw instruction.

[Tutorial Script For Phase 1]

gdb bomb
break explode_bomb
break phase_1
break finish_lab      (this function doesn't exist)
run [input a string]
disas      (shows disassembly of phase 1, also your current place in the program)
help info   (illustrate help command)
info registers (show the contents of the registers)
q
step       (bomb will explode now unless you magically guessed the right string)
kill       (will hit breakpoint on explode_bomb, don't want it to explode, kill it!!!)
run [input a string]
steipi
steipi
disas      (show that we are at the function call to compare strings--layout asm is ok too)
x / 16wx $rdi  x /NUM SIZE FORMAT (shows contents of memory at address x)
x / s $rdi     (hey looks like when we interpret the contents as characters...)
x / s $rsi     (let's look at what is in the other register... hey!)
kill
run [your string for phase 1!]

---END---

Misc Tip:
set args (for rerunning with no args)