SE1011: Half-Exam 1   Name:

This is a closed-book, closed-computer, etc. exam. You may use one 8.5"x11" sheet of notes, which you will turn in with your exam. Review all questions before you get started. Use the page at the end of the exam for extra work. The exam is printed double-sided.

1. (10 points) For each item, **write** "yes" if the code compiles. If it does not compile, **fix it**. The type and contents of each variable should be the same as in the broken code.

    a. long x = 5;
        int y = x;

    b. float f = 5.3;
        double d = f;

    c. String str = "A";
        char c = str;

    d. double d = 9.6;

2. (5 points) **Write** what will be displayed if the following line is run:
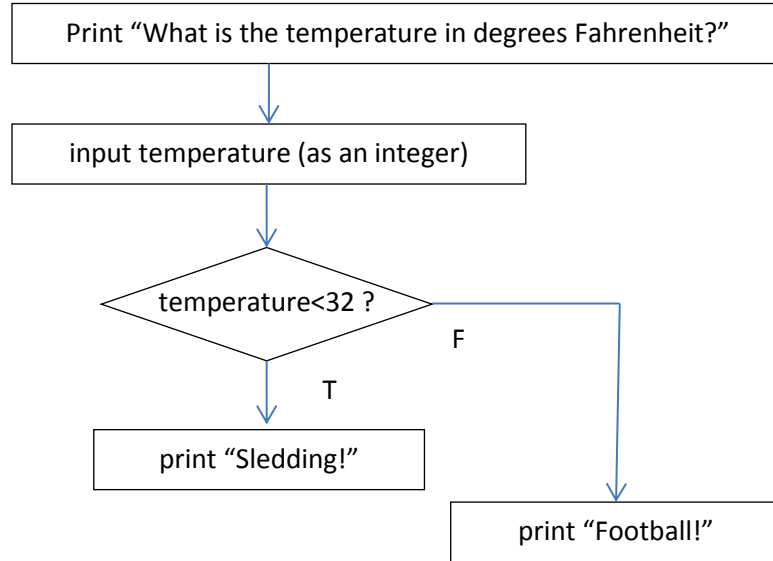
   System.out.println(15 % 2 - 2 % 15);

3. (5 points) **Describe** how the compiler's role is different from the Java Virtual Machine's.

4. (10 points) Consider the following program:

```
public static void main(String[] args) {
    Scanner in = new Scanner(System.in);
    System.out.println("Please␣enter␣a␣word.");
    String word = in.next();
    System.out.println("You␣entered␣a␣"+ word.length() + "␣letter␣word");
}
```

Write what will be displayed if Exam is entered by the user.

5. (15 points) *Translate* the following flow chart to psedeudo-code.

6. (5 pts.) *Describe* the difference between the java-byte code stored in a .class file and the binary code in an .exe file