**Pencil And Paper Assignment for Lesson 2**

1. Consider the following if…then logic:

if(age > 65) socialSecurityStatus = "eligible";

else socialSecurityStatus = "ineligible";

Rewrite this (pseudo) code using the Java ternary operator.

R: socialSecurityStatus = age > 65 ? “eligible” : “ineligible”;

2. Suppose a String s is initialized by

String s = "a friendly face";

a. Compute the value of the expression s.charAt(2);

R: f

b. What is the value of s.length()?

R: 15

c. What is the value of s.substring(2,9)? s.substring(4)?

R1: friendl

R2: iendly face

3. Write a Java expression that computes each of the following:

a. Given the radius r of a circle, compute the area of the circle, and store it in a variable A.

R: double A = Math.PI \* Math.pow(r, 2);

b. Given the length len and width wid of a rectangle, compute the length of the diagonal of the rectangle, and store it in a variable diag.

R: double diag = Math.sqrt(Math.pow(len, 2) + Math.pow(wid, 2));

4. Compute the following (without writing any Java code) and indicate the type of your answer. (Example: 4 \* 3 + 2 equals 14, of type int.)

a. 3 \* 5 / 9 % 2

R: the answer is 1, int

b. 4 ^ 3 & 5

R: the answer is 1, int

c. 13 >> 2 << 2 ^ 4

R: the answer is 0, int

d. 32 | 16/3 >> 2 & 5.

R: the answer is 37, int

5. You are reviewing some old Java programs in your company's IT department and you read the following assignment statement in some abandoned code:

int a = (b = 5);

Is the statement legal (i.e. would it compile)? If so, what value is assigned to the variable a? Explain.

R: Probably It would not compile because b is not defined, but supposing that there is a piece of code where b is defined, a would receive the value stored in b after b receive the value 5.