Review of Loops

1) How many times will the following loop run?

int i = 0;

while (i < 10)

{

System.out.println(i);

i++;

}

a) 0

b) 8

c) 9

d) 10

2.) What is the output of the code snippet given below?

int i = 0;

while (i != 9)

{

System.out.println("" + i);

i = i + 2;

}

a) No output

b) 0 2 4 6 8

c) 10 12 14 16 18 …. (infinite loop)

d) 0 2 4 6 8 10 12 14 …. (infinite loop)

3.) Java provides three types of loops: *while*, *for*, and *do* (also called *do-while*). Theoretically, they are interchangeable – any program you write with one kind of loop could be rewritten using any of the other types of loops. As a practical matter, though, it is often the case that choosing the right kind of loop will make your code easier to produce, debug, and read. It takes time and experience to learn to make the best loop choice, so this is an exercise to give you some of that experience.

What is the output of the following while-loop, and then convert it to a for-loop:

String s = "abcde";

int i = 1;

while (i < 5)

{

System.out.print(s.substring(i, i + 1));

i++;

}

4.) What is the output of the code snippet given below?

int i;

int j = 0;

for (i = 0; i < 5; i++)

{

if (i % 2 == 0)

{

i = i + 2;

j++;

}

else

{

i++;

j = j + 2;

}

j++;

}

System.out.println("i=" + i + ", j=" + j);

a) i=7, j =7

b) i =7, j =6

c) i =6, j =7

d) i =5, j =5

5.) What for loop can be used in the indicated area so the code will print:

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for (int val = 0; val < 4; val ++)

{

System.out.print ("+");

// Put for loop here

{

System.out.print ("\*");

}

System.out.println ();

}

a) for (int num = 0; num < 4 – val; num++)

b)for (int num = 0; num < val; num++)

c)for (int num = 4; num < val; num++)

d)for (int num = 4; num > 0; num--)