1. What gets printed? Please show output as it will appear or indicate “NO OUTPUT” or show some of the output followed by “INFINITE LOOP.”

```java
int a = 4;
while (a > 0)
{
    a = a - 2;
    System.out.println(a);
}
```

Output:

```java
int a = 4;
while (a > 0)
{
    System.out.println(a);
    a++;
}
```

Output:

```java
int a = 1;
while (a <= 4)
{
    if ((a%2)==0)
    {
        System.out.println(a);
        a++;
    }
    a++;
}
```

Output:

```java
int a = 4;
while (a < 4)
{
    System.out.println (a);
    a++;
}
```

Output:
2. Let’s look at the problem of repeatedly obtaining input and performing a calculation, for example, converting a temperature from Celsius to Fahrenheit, using the following algorithm:

Rewrite this algorithm, modifying it so that it uses a while structure to repeat the processing of each input in two different ways.

Variables: c, f

Algorithm:

```
input c
f = c*(9/5)+32
print f
```

a) Keep converting temperatures and ask each time whether to keep going.

Variables:

Algorithm:

b) Convert 50 temperatures (exact count).

Variables:

Algorithm:
1. What gets printed? Please show output as it will appear or indicate “NO OUTPUT” or show some of the output followed by “INFINITE LOOP.”

```java
int a = 7;
while (a > 0) {
    a = a - 2;
    System.out.println(a);
}
```

Output:
```
7
5
3
1
0
```

```java
int a = 7;
while (a > 0) {
    System.out.println(a);
    a++;
}
```

Output:
```
7
6
5
4
3
2
1
```

```java
int a = 1;
while (a <= 7) {
    if ((a%2)==0)
        System.out.println(a);
    a++;
}
```

Output:
```
2
4
6
```

```java
int a = 7;
while (a < 7) {
    System.out.println (a);
    a++;
}
```

Output:
```
7
6
5
4
3
2
1
```

2. Let's look at the problem of repeatedly obtaining input and performing a calculation, for example, converting a temperature from Celsius to Fahrenheit, using the following algorithm:

Variables:
- c, f

Algorithm:
- input c
- f = c*(9/5)+32
- print f

Rewrite this algorithm, modifying it so that it uses a while structure to repeat the processing of each input in two different ways.

a) Keep converting temperatures until user quits program (infinite loop).
   Variables:

   Algorithm:

b) Keep converting temperatures until user inputs -999 (sentinel value)
   Variables:

   Algorithm:
The remaining two versions not used in Fall 2013
Quiz 3

Name: ________________________________

1. What gets printed? Please show output as it will appear or indicate “NO OUTPUT” or show some of the output followed by “INFINITE LOOP.”

```java
int a = 7;
while (a != 0)
{
    System.out.println(a);
    a = a - 2;
}
```

```
int a = 7;
while (a < 7)
{
    System.out.println(a);
    a++;
}
```

```
int a = 1;
while (a <= 7)
{
    a++;
    if ((a%2)==0)
        System.out.println(a);
}
```

```
int a = 1;
while (a < 7)
{
    a++;
    System.out.println(a);
}
```
Quiz 3

1. What gets printed? Please show output as it will appear or indicate “NO OUTPUT” or show some of the output followed by “INFINITE LOOP.”

```java
int a = 4;
while (a != 0) {
    System.out.println(a);
    a = a - 2;
}
```

Output:

```java
int a = 4;
while (a < 4) {
    System.out.println(a);
    a++;
}
```

Output:

```java
int a = 1;
while (a <= 4) {
    a++;
    if ((a%2)==0)
        System.out.println(a);
}
```

Output:

```java
int a = 1;
while (a < 4) {
    a++;
    System.out.println(a);
}
```

Output: