1. What gets printed? Please show output as it will appear or indicate “NO OUTPUT”. If it’s an infinite loop, be sure to show at least 3 of the output followed by “INFINITE LOOP.”

```java
int a = 10;
while (a <= 15)
{
    a++;
    System.out.println(a);
}
```

Output:

```java
int a = 0;
while (a < 5)
{
    System.out.println(a);
    a--;
}
```

Output:

```java
int a = 8;
while (a < 8)
{
    System.out.println(2*a);
    a++;
}
```

Output:

```java
int a = 1;
while (a < 14)
{
    System.out.println (2*a);
    a = a + 5;
}
```

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:

<table>
<thead>
<tr>
<th>Variables:</th>
<th>c, f</th>
</tr>
</thead>
</table>
| 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, as specified below.

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". If it's an infinite loop, be sure to show at least three of the output followed by "INFINITE LOOP."

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

Output:

```java
int a = 3;
while (a > 0)
{
    System.out.println(a);
    a = a - 2;
}
```

Output:

```java
int a = 2;
while (a < 5)
{
    a++;  
    System.out.println(a);
}
```

Output:

```java
int a = 1;
while (a <= 4)
{
    System.out.println (3*a + 1);
    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:

<table>
<thead>
<tr>
<th>Variables:</th>
<th>c, f</th>
</tr>
</thead>
</table>

**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, as specified below.

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

**Variables:**

**Algorithm:**

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

**Variables:**

**Algorithm:**