1. What does the following code display?

```java
int num = 1;
while(num<5) {
    System.out.println(num + " : " + (num * num));
    num++;
}
```

What is the value of the variable num after the loop finishes?

2. Read the following code, and figure out what its purpose is. What does it do?

```java
int mystery = 0;
int i=1;
for(; i<10; i++) {
    mystery += i;
}
int mystery = 0;
int i = 1;
while(i<10) {
    mystery+=i;
    i++;
3. Writing loops with counters:
Fill out the following program so that it reads a number $N$ from the keyboard, and prints a line with a “*” followed by $N$ spaces followed by another “*”.

For instance,
```java
gcd PrintStarLine
Please enter a number: 6
*   *
```

/* Program to print spaced stars */
import java.util.Scanner;
public class PrintStarLine
{
    public static void main(String [] args)
    {
        Scanner kb =
        new Scanner(System.in);
```
System.out.println
  ("Enter a number: ");
int N = kb.nextInt();
// Fill this in!
}