What is the output of this program?

```
1  public class StrategyPractice {
2      public static void main(String[] args) {
3          int x = 1;
4          int y = 2;
5
6          int z = x;
7          x = y;
8          y = z;
9
10         printSum(x, y);
11         printSum(z, y);
12
13         int val = getSum(x, y+z);
14         System.out.println(val);
15         System.out.println("Bye!");
16     }
17
18     public static void printSum(int a, int b) {
19         System.out.println(a + b);
20     }
21
22     public static int getSum(int a, int b) {
23         return a + b;
24     }
25 }
```

At the bottom of the page, write the output produced by the following program, as it would appear on the console.

```
1  public class Farmer {
2      public static void main(String[] args) {
3          String farm = "here";
4          String old = "macdonald";
5          String macdonald = "there";
6          String everywhere = "farm";
7          String here = "everywhere";
8          String there = "old";
9          String quack = "duck";
10
11         mystery(old, macdonald, farm);
12         mystery("quack", here, "there");
13         mystery(quack, "here", "farm");
14         mystery(old, everywhere, there);
15     }
16
17     public static void mystery(String macdonald, String farm,
           String old) {
18         String end = ".";
19         if (macdonald.length() > farm.length()) {
20             end = "!";
21         }
22         System.out.println(old + " " + macdonald + " had a " + farm
               + end);
23     }
24 }
```

For each call below to the following method, write the output that is produced, as it would appear on the console:

```
1  public static void wildMystery(int n) {
2      int x = 1;
3      int y = 1;
4      String output = "";
5      while (y < n) {
6          x++;
7          if (x % 2 == 0) {
8              n++;
9          } else {
10             output = n + " ";
11         }
12         y = 10 * y - x;
13     }
14     output = output + x + " " + y;
15     System.out.println(output);
16 }
```

wildMystery(0); _____

wildMystery(6); _____

wildMystery(31); _____

What is the output of this program?

```
1  public class Conditionals {
2      public static void main(String[] args){
3          int x = 3;
4          int y = 9;
5          int z = 5;
6          manipulate(x, y, z);
7          manipulate(y, z, z);
8      }
9
10     public static void manipulate(int x, int y, int z) {
11          if (y % x == 0) {
12              if (y >= z) {
13                  x = x * x;
14              } else {
15                  z = z * z;
16              }
17          } else {
18              if (z >= x) {
19                  if (y >= z) {
20                      y = y * y;
21                  }
22              } else {
23                  z = z * z;
24              }
25          }
26          if (y % x == 0) {
27              x = x + 3;
28          } else {
29              y = y * 2;
30          }
31          System.out.println("x = " + x);
32          System.out.println("y = " + y);
33          System.out.println("z = " + z);
34      }
35 }
```

What is the output of this program?

```
1  public class Greeting {
2      public static void main(String[] args) {
3          String banner = "Good Night";
4          System.out.println("banner");
5
6          greet("Alice", "night");
7          System.out.println(banner);
8
9          greet("Bob", "night");
10         System.out.println(banner);
11     }
12
13     public static String greet(String name, String time) {
14         String greeting = "Good " + time + " " + name;
15         if (name.equals("Alice")) {
16             return greeting;
17         }
18         greeting = greeting + "!";
19         System.out.println(greeting);
20         return greeting;
21     }
22 }
```

At the bottom of the page, write the output produced by the following program, as it would appear on the console.

```
1  public class OddMystery {
2      public static void main(String[] args) {
3          int x = 2;
4          int y = 3;
5
6          System.out.println(x + y + "!");
7
8          compute(y, x);
9
10         double val = compute(x, y + 1);
11
12         System.out.println(val);
13     }
14
15     public static double compute(int x, int y) {
16         int z = y;
17         y = x;
18         x = z;
19
20         System.out.println("x" + y + z);
21
22         return Math.pow(x, y);
23     }
24
25 }
```