

# Review Control Key

Determine the program output and print the result in the right column.

## Exercise01

```
// Output1301.java

public class Output1301
{
    public static void main(String args[])
    {
        for (int x = 1; x < 3; x++)
            for (int y = 1; y <= 3; y++)
                System.out.println(x + " " + y);
    }
}
```

```
1 1
1 2
1 3
2 1
2 2
2 3
```

## Exercise02

```
// Output1302.java

public class Output1302
{
    public static void main(String args[])
    {
        for (int x = 0; x < 3; x++)
        {
            for (int y = 1; y < 4; y++)
                System.out.print(x * y + " ");
            System.out.println(!);
        }
    }
}
```

```
0 0 0 !
1 2 3 !
2 4 6 !
```

### Exercise03

```
// Output1303.java

public class Output1303
{
    public static void main(String args[])
    {
        int x = 5;
        int k = 0;
        int y = 0;
        while (x < 7)
        {
            y = 1;
            while (y < 9)
            {
                y++;
                k = x + y;
            }
            x += y;
        }
        System.out.println("k = " + k);
    }
}
```

k = 14

### Exercise04

```
// Output1304.java

public class Output1304
{
    public static void main(String args[])
    {
        int a = 2, b = 3, c = 4, d = 5;
        while (a < b || c < d)
        {
            a = c + d;
            c = a + b;
        }
        System.out.println(a + " " + b + " " + c + " " + d);
    }
}
```

9 3 12 5

### Exercise05

```
// Output1305.java
```

```
public class Output1305
```

```
{
```

```
    public static void main(String args[])
```

```
    {
```

```
        int a = 0;
```

```
        int b = 2;
```

```
        for (int k = 0; k < 4; k++)
```

```
        {
```

```
            a = k;
```

```
            b += k;
```

```
            while (a < b)
```

```
            {
```

```
                System.out.println(a + " " + b);
```

```
                a += b;
```

```
                b += k;
```

```
            }
```

```
        }
```

```
    }
```

```
}
```

```
0 2
```

```
1 3
```

```
2 6
```

```
3 11
```

### Exercise06

```
// Output1306.java
```

```
public class Output1306
```

```
{
```

```
    public static void main(String args[])
```

```
    {
```

```
        int a = 0;
```

```
        int b = 20;
```

```
        while (a < b)
```

```
        {
```

```
            a += 2;
```

```
            b -= 3;
```

```
            System.out.println(a + " " + b);
```

```
        }
```

```
    }
```

```
}
```

```
2 17
```

```
4 14
```

```
6 11
```

```
8 8
```

### Exercise07

// Output1307.java

```
public class Output1307
{
    public static void main(String args[])
    {
        int t = 0;
        for (int p = 0; p <= 4; p++)
            for (int q = 0; q < 4; q++)
                t++;
        System.out.println("t = " + t);
    }
}
```

t = 20

### Exercise08

// Output1308.java

```
public class Output1308
{
    public static void main(String args[])
    {
        int t = 0;
        for (int p = 0; p < 10; p++)
            for (int q = p; q < 10; q++)
                t++;
        System.out.println("t = " + t);
    }
}
```

t = 55

### Exercise09

// Output1309.java

```
public class Output1309
{
    public static void main(String args[])
    {
        int n1 = 0;
        int n2 = 1;
        int n3 = 0;
        for (int k = 3; k < 10; k++)
        {
            n3 = n1 + n2;
            n1 = n2;
            n2 = n3;
        }
        System.out.println("n3 = " + n3);
    }
}
```

n3 = 21

### Exercise10

// Output1310.java

```
public class Output1310
{
    public static void main(String args[])
    {
        int a = 5;
        int b = 10;
        int c = 25;
        while (a < b || b < c)
        {
            a += 3;
            b += 2;
            c -= 3;
        }
        System.out.println(a + " " + b + " " + c);
    }
}
```

20 20 10

### Exercise11

```
// Output1311.java

public class Output1311
{
    public static void main(String args[])
    {
        int a = some unknown integer;
        int b = some unknown integer;
        int c = 0;
        if (a < b)
            if (b < a)
                c = 2000;
            else
                c = 3500;
        else
            if (b > a)
                c = 2500;
            else
                c = 3500;
        System.out.println("c = " + c);
    }
}
```

**c = 3500**

**for all values  
of a and b**

### Exercise12

```
// Output1312.java

public class Output1312
{
    public static void main(String args[])
    {
        for (int x = 1; x <= 5; x++)
        {
            for (int y = x; y <= 5; y++)
                System.out.print(x + y + " ");
            System.out.println();
        }
    }
}
```

```
2 3 4 5 6
4 5 6 7
6 7 8
8 9
10
```