Snippet 1

```
public class NestedLoopOutput {
        public static void main(String[] args) {

                for (int i = 1; i <= 3; i++) {

                        for (int j = 1; j <= 2; j++) {

                        System.out.print(i + " " + j + " "); }

                        System.out.println();

        }}

}
```

Expected Output:

Iteration	Outer Loop	Inner loop	Output printed
1	1	1	11
1	1	2	12

After 1 Iteration output: 1112

Iteration	Outer Loop	Inner loop	Output printed
2	2	1	21
2	2	2	22

After 2 Iteration output: 2122

Iteration	Outer Loop	Inner loop	Output printed
3	3	1	31
3	3	2	32

After 2 Iteration output: 3132

Snippet 2

```
public class DecrementingLoop {
        public static void main(String[] args) {

                int total = 0;
                for (int i = 5; i > 0; i--) {
```

```
            total += i;
            if (i == 3) continue;

            total -= 1;

        }

        System.out.println(total); }

}
```

Iteration	Outer Loop	Total	Output Expected
1	5	4	4
2	4	7	7
3	3	10	
4	2	11	11
5	1	11	**11**

Snippet 3

```
public class WhileLoopBreak {
    public static void main(String[] args) {

        int count = 0;

        while (count < 5) {

            System.out.print(count + " ");

            count++;
            if (count == 3) break;

        }

        System.out.println(count); }

}
```

Iteration	Count	Output Expected	Count.	Output Expected
1	0	0	1	1
2	1	1	2	2

3	2	2	3	break.(3)

Snippet 4

```
public class DoWhileLoop {
public static void main(String[] args) {

int i = 1;

do {

System.out.print(i + " ");

i++;
} while (i < 5); System.out.println(i);

} }
```

Iteration	i	Output Expected	i	Output Expected
1	1	1	2	2
2	2	2	3	3
3	3	3	4	4
4	4	4	5	5

Snippet 5

```
public class ConditionalLoopOutput {

public static void main(String[] args) {

        int num = 1;
        for (int i = 1; i <= 4; i++) {

                if (i % 2 == 0) {

                        num += i;

                } else {

                        num -= i;

} }

System.out.println(num); }
```

}

Iteration	num	num	Output Expected
1	1	0	0
2	0	2	2
3	2	-1	-1
4	-1	3	**3**

Snippet 6

```
public class IncrementDecrement {

	public static void main(String[] args) {

		int x = 5; //6 - 5 - 5 - 6
		int y = ++x - x-- + --x + x++; —-> 6 - 6 + 5 + 5 = 10

		System.out.println(y);

} }
```

Expected Output = 10

Snippet 7

```
public class NestedIncrement {
	public static void main(String[] args) {

		int a = 10;//11, 10
		int b = 5;//4,5
		int result = ++a * b-- - --a + b++; // 11 * 5 - 10 + 4 = 55 - 14 = 41

		System.out.println(result);

} }
```

Expected output is 41

Snippet 8

```
public class LoopIncrement {
	public static void main(String[] args) {

		int count = 0;
		for (int i = 0; i < 4; i++) { i = 5

			count += i++ - ++i; -> 0 - 2 = -1 ; 1 - 3 = -2 ; 2 - 4 = -2 ; 3 - 5 = -2

		}

			System.out.println(count); }

}
```

Iteration	count	count+=
0	0	-2
2	-1	**-4 —-> Expected Output**