

Section 2 - Guess the output

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++) {
                SO Print (i + " " + j + " ");
            }
            System.out.println();
        }
    }
}

```

3. Snippet 1

i	j	output
1	1	1 1 1 2
1	2	
2	1	2 1 2 2
2	2	
3	1	3 1 3 2
3	2	

Snippet 2

I $i = 5$ Total = $0 + 5 = 5$

$i == 3$ is Not True

Total = $5 - 1 = 4$

II $i = 4$ Total = $4 + 4 = 8$

$i == 3$ is False

total = $8 - 1 = 7$

III $i = 3$ Total = $7 + 3 = 10$

$i == 3$ is True

// Skip

~~IV~~ $i = 2$ Total = $10 + 2 = 12$

$i == 3$ Not

total = $12 - 1 = 11$

$i = 1$ Total = $11 + 1 = 12$

$i == 3$ Not

total = $12 - 1 = 11$

guessed output = 11

Snippet 3

Count = 0 \rightarrow Print 0 \rightarrow Count 1; $C == 3$ is False

Count = 1 \rightarrow Print 1 \rightarrow Count 2; $C == 3$ is False

Count = 2 \rightarrow Print 2 \rightarrow Count 3; True, Break

guess O/P \rightarrow 0, 1, 2

Snippet - 4

```
i = 1 : Print i = 2
i = 2 : Print i = 3
i = 3 : " i = 4
i = 4 : " i = 5
```

Output

1 2 3 4 5

Snippet - 5

x = 5

y = ++x - x -- + -- x + x ++;

++x ⇒ x = 6

x -- : x = 6 → x = 5

--x : x = 4

x ++ : x = 4 → x = 5

y = 6 - 6 + 4 + 4

= 8

O/P → 8

Snippet 5

i = 1 : 1 % 2 == 0 False; Num = 1 - 1 = 0

i = 2 : 2 % 2 == 0 False; Num = 0 - 2 = -2

i = 3 : 3 % 2 != 0; Num = -2 - 3 = -5

i = 4 : 4 % 2 == 0 Num = -5 + 1 = -4

O/P = -4

Snippet - 7

$$a = 10$$

$$b = 5$$

$$\text{result} = ++a * b-- --a + b++$$

$$++a \rightarrow a = 11$$

$$b-- \rightarrow b = 5 \rightarrow b = 4$$

$$--a \rightarrow a = 10$$

$$b++ \rightarrow b = 4 \rightarrow b = 5$$

$$11 \times 5 - 10 + 4 = 55 - 6 = 49$$

Q5

O/P

$$\Rightarrow 49$$

Snippet - 8

$$\text{Count} += i++ - ++i$$

$$\text{Count} = \text{Count} + i++ - ++i$$

I $i = 0$

$$i++ \rightarrow i = 0 \rightarrow i = 1$$

$$++i \rightarrow i = 2$$

$$\text{Count} = 0 + 0 - 2 = -2$$

II $i = 1$

$$i++ \rightarrow i = 1 \rightarrow i = 2$$

$$++i \rightarrow i = 3$$

$$\text{Count} = \cancel{0 + 1 - 3} = -2 + 1 - 3 = -4$$

III

$$i = 3$$

$$i++ \rightarrow i = 3 \rightarrow i = 4$$

$$\text{O/P} = -4$$