

### 1. Print Numbers

Write a for loop to print numbers from 1 to 10 in the console.

```
var num=10  
  
for (var x=1; x <=num; x++){  
  
  console.log(x);  
  
}
```

### 2. Sum of Numbers

Write a for loop to calculate the sum of the first 5 natural numbers (1, 2, 3, 4, 5) and display the result.

```
var num=5  
  
sum=0  
  
for (var x=1; x <=num; x++){  
  
  sum=sum+x  
  
}  
  
console.log(sum);
```

### 3. Even Numbers

Write a for loop to print all even numbers between 1 and 20.

```
var num=20  
  
for (var x=2; x <=num; x++){  
  
  if(x%2==0){  
  
    console.log(x)  
  
  }  
  
}
```

### 4. Reverse Counting

Write a for loop to print numbers from 10 to 1 in descending order.

```
var num=10  
  
for (var x=10; x >=1; x--){  
  
  console.log(x);  
  
}
```

```
}
```

### 5. Multiplication Table

Write a for loop to print the multiplication table of 5 (from  $5 \times 1$  to  $5 \times 10$ ).

```
var num=10
```

```
for (var x=1; x<=10; x++){
```

```
console.log("5 * "+ (x) +" =" +(5*x));
```

```
}
```

### Basic Level:

6. What is the starting point of a basic for loop in JavaScript?

-

A) for (let i = 1; i < 10; i++)

-

**B) for (let i = 0; i < 10; i++)**

-

C) for (let i = 0; i <= 10; i++)

-

D) for (let i = 1; i <= 10; i++)

7. What part of the for loop controls how many times the loop executes?

-

A) Initialization

-

B) Condition

-

C) Increment/Decrement

-

**D) All of the above**

8. What will be the output of the loop?

```
for (let i = 0; i < 5; i++) {  
  console.log(i);  
}
```

-

A) 0, 1, 2, 3, 4

-

B) 1, 2, 3, 4, 5

-

C) 1, 2, 3, 4

-

D) 0, 1, 2, 3, 4, 5

9. Can a for loop be used without a condition?

-

A) Yes

-

B) No

10. What is the significance of the increment part of the for loop?

-

A) It checks the condition.

-

B) It initializes the loop.

-

C) It changes the loop variable each iteration.

-

D) It ends the loop.

11. What will be the output of the following code?

```
for (let i = 5; i > 0; i--) {  
  console.log(i);  
}
```

-

A) 5, 4, 3, 2, 1

-

B) 1, 2, 3, 4, 5

-

C) 4, 3, 2, 1

-

D) 5, 4, 3, 2, 1, 0

12. Can the loop variable be modified inside the for loop body?

-

A) Yes

-

B) No

13. What happens if the condition in the for loop is always true?

-

A) Loop runs indefinitely.

-

B) Loop will never run.

-

C) Loop runs once.

-

D) Loop exits immediately.

14. What does the loop do?

```
for (let i = 3; i < 10; i += 2) {  
  console.log(i);  
}
```

-

A) 3, 5, 7, 9

-

B) 4, 6, 8, 10

-

C) 5, 7, 9

-

D) 3, 4, 5, 6

15. What will happen in this code?

```
for (let i = 0; i < 3; i++) {  
  let i = 5;  
  console.log(i);  
}
```

-

- A) 0, 1, 2
  - B) 5, 5, 5
  - C) Error
  - D) Infinite loop
- 

**Intermediate Level:**

11. What is the scope of the variable `i` in a for loop?

- A) Global (if we declare with `var`)
- B) Local to the block (if we declared with `let` and `const`)
- C) Local to the function
- D) None

12. Which of the following is a valid for loop?

- A) `for (let i = 0;; i++)`
- B) `for (let i = 0, i < 5, i++)`
- C) `for (i = 0; i < 5; i++)`
- D) `for (i == 0; i < 5; i++)`

13. How can you skip the current iteration in a for loop?

- A) `continue;`
- B) `break;`
- C) `return;`
- D) `exit;`

14. How can you stop the execution of a for loop before it completes all iterations?

- A) continue;
- B) stop;
- C) break;
- D) exit;

15. What happens if the increment is missing in the for loop?

- A) Infinite loop
- B) Syntax error
- C) Loop runs once
- D) No iteration occurs

16. What will be the output?

```
for (let i = 0; i < 5; i += 2) {  
  console.log(i);  
}
```

- A) 0, 1, 2, 3, 4
- B) 0, 2, 4
- C) 0, 2
- D) 2, 4

17. What will happen?

```
for (let i = 0; i < 3; i++)  
  for (let j = 0; j < 2; j++)  
    console.log(i + j);
```

-

**A) 0, 1, 1, 2, 2, 3**

-

B) 0, 1, 1, 2, 2, 3, 3

-

C) 0, 1, 1, 2, 2, 3, 3, 4

-

D) 0, 1, 2, 3, 4

18. What will the following loop output?

```
for (let i = 0; i <= 10; i++) {  
  if (i === 5) break;  
  console.log(i);  
}
```

-

**A) 0, 1, 2, 3, 4**

-

B) 0, 1, 2, 3, 4, 5

-

C) 0, 1, 2, 3, 4, 5, 6

-

D) 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

19. What will the following code do?

```
for (let i = 1; i <= 10; i *= 2) {  
  console.log(i);  
}
```

-

**A) 1, 2, 4, 8**

-

B) 1, 3, 5, 7, 9

-

C) 2, 4, 8

-

D) 1, 2, 3, 4

20. What will this for loop do?

```
for (let i = 10; i >= 0; i -= 3) {  
  console.log(i);  
}
```

-

**A) 10, 7, 4, 1**

-

B) 10, 8, 6, 4

-

C) 10, 9, 8, 7

-

D) Error

---

#### Advanced Level:

21. How many times will the following loop run?

```
for (let i = 0; i !== 10; i += 3) {  
  console.log(i);  
}
```

-

A) 4

-

B) 5

-

C) 6

-

**D) Infinite**

22. What will this loop print?

```
for (let i = 0; i < 3; i++) {  
  if (i % 2 === 0) continue;  
  console.log(i);  
}
```

-

A) 1, 2

-

B) 0, 2

-

**C) 1**

-

D) 0, 1, 2

23. Can the for loop header be empty?



```
for (;;) {  
  // some code  
}
```

-

**A) Yes**

-

B) No

24. How can the following code be corrected?

```
for (let i = 0; i < 5 i++) {  
  console.log(i);  
}
```

-

A) Add a semicolon after i++.

-

B) Remove let.

-

**C) Add a comma between statements.**

-

D) Add parentheses around i++.

25. What is the output?

```
for (let i = 0; i <= 3; i++, console.log(i));
```

-

**A) 1, 2, 3, 4**

-

B) 0, 1, 2, 3, 4

-

C) 0, 1, 2, 3

-

D) 1, 2

26. What will be the final value of i in this code?

```
let i;  
for (i = 0; i < 5; i++) {}  
console.log(i);
```

-

- A) 4
- B) 5
- C) 6
- D) Undefined

27. What will happen in this loop?

```
for (let i = 0; i < 10; i = i + 3) {  
  console.log(i);  
}
```

- A) 0, 3, 6, 9
- B) 1, 4, 7, 10
- C) Infinite loop
- D) Syntax error

28. How many times will this loop run?

```
for (let i = 5; i <= 10; i += 2) {}
```

- A) 3
- B) 4
- C) 5
- D) Infinite

29. What will the following code print?

```
for (let i = 0; i < 10; i++) {  
  if (i % 3 === 0) {  
    console.log(i);  
  }  
}
```

- 
- A) 1, 2, 3, 6, 9
- 
- B) 3, 6, 9
- 
- C) 0, 3, 6, 9
- 
- D) 0, 2, 4, 6

30. What happens when the loop has no initialization?

```
for (; i < 5; i++) {  
  console.log(i);  
}
```

- 
- A) Error
- 
- B) Infinite loop
- 
- C) 0, 1, 2, 3, 4
- 
- D) Depends on the scope of i

31. What will the following code do?

```
for (let i = 1; i < 20; i *= 3) {  
  console.log(i);  
}
```

- 
- A) 1, 3, 9
- 
- B) 1, 2, 4, 8
- 
- C) 1, 3, 6, 9
- 
- D) Infinite loop

32. How does the for loop differ from the while loop in terms of syntax?

- 
- A) Initialization happens outside the loop in while.
-

- B) while loop is more optimized.
- C) for loop doesn't require a condition.
- D) while loop can't be nested.

33. What will happen if there is no update statement in the for loop?

- A) Loop will run once.
- **B) Infinite loop.**
- C) Loop won't run at all.
- D) Syntax error.

34. How many times does this loop run?

```
for (let i = 0; i++ < 5;) {}
```

- **A) 4**
- B) 5
- C) 6
- D) Infinite

35. What is the result of this code?

```
for (let i = 5; i; i--) {  
  console.log(i);  
}
```

- A) 4, 3, 2, 1
- **B) 5, 4, 3, 2, 1**
- C) 4, 3, 2, 1, 0

D) Infinite loop

---

36. What will the following loop print?

```
for (let i = 1; i <= 3; i++) {  
  for (let j = 1; j <= 2; j++) {  
    console.log(i, j);  
  }  
}
```

- **A) 1, 1; 1, 2; 2, 1; 2, 2; 3, 1; 3, 2**
- B) 1, 2; 2, 2; 3, 2
- C) 1, 2; 2, 1; 3, 2
- D) Syntax error

37. How many times will the inner loop run in this code?

```
for (let i = 0; i < 4; i++) {  
  for (let j = 0; j < 3; j++) {  
    console.log(i, j);  
  }  
}
```

- **A) 4**
- B) 7
- **C) 12**
- D) 10

38. How many total iterations will both loops run?

```
for (let i = 1; i <= 5; i++) {  
  for (let j = 1; j <= i; j++) {  
    console.log(i, j);  
  }  
}
```

-

**A) 15**

-

B) 10

-

C) 12

-

D) 20

39. What is printed by the following loop?

```
for (let i = 2; i <= 4; i++) {  
  for (let j = 1; j < i; j++) {  
    console.log(i, j);  
  }  
}
```

-

**A) 2, 1; 3, 1; 3, 2; 4, 1; 4, 2; 4, 3**

-

B) 2, 1; 3, 2; 4, 3

-

C) 2, 2; 3, 3; 4, 4

-

D) 1, 2; 2, 3

40. How many iterations will this loop combination execute?

```
for (let i = 0; i < 3; i++) {  
  for (let j = i; j < 3; j++) {  
    console.log(i, j);  
  }  
}
```

-

**A) 9**

-

**B) 6**

-

C) 5

-

D) 3

41. What is the final output of this nested loop?

```

let result = '';
for (let i = 0; i < 3; i++) {
  for (let j = 0; j < 3; j++) {
    result += i + ' ' + j + ' ';
  }
}
console.log(result);

```

- A) "000 011 022"
- B) "00 01 02 10 11 12 20 21 22"
- C) "012 012 012"
- D) Infinite loop

42. What does this code output?

```

for (let i = 1; i <= 2; i++) {
  for (let j = 1; j <= 3; j++) {
    if (i + j === 4) {
      console.log(i, j);
    }
  }
}

```

- A) 1, 3; 2, 2
- B) 1, 1; 2, 3
- C) 2, 1; 1, 2
- D) 1, 2; 2, 1

43. What will happen when the following nested loop is executed?

```

for (let i = 0; i < 3; i++) {
  for (let j = 0; j < 2; j++) {
    if (j === 1) break;
    console.log(i, j);
  }
}

```

-

**A) 0, 0; 1, 0; 2, 0**

-

B) 0, 1; 1, 1; 2, 1

-

C) 0, 1; 1, 0

-

D) Infinite loop

44. What does this loop combination output?

```
for (let i = 1; i <= 3; i++) {  
  for (let j = 1; j <= 2; j++) {  
    if (i === 2) continue;  
    console.log(i, j);  
  }  
}
```

-

A) 1, 1; 1, 2; 2, 1; 2, 2; 3, 1; 3, 2

-

**B) 1, 1; 1, 2; 3, 1; 3, 2**

-

C) 1, 2; 2, 1; 3, 2

-

D) Infinite loop

45. What will the output be for this nested loop setup?

```
let output = '';  
for (let i = 1; i <= 3; i++) {  
  for (let j = i; j <= 3; j++) {  
    output += i + ' ' + j + ' ';  
  }  
}  
console.log(output);
```

-

**A) "11 12 13 22 23 33"//without double quotes**

-

B) "12 23 34"

-

C) "12 13 23"

-

D) Infinite loop



46. How many times will the inner loop execute in total?

```
for (let i = 0; i < 4; i++) {  
  for (let j = i; j >= 0; j--) {  
    console.log(i, j);  
  }  
}
```

-

A) 10

-

B) 5

-

C) 4

-

D) 8

47. What does this code print?

```
let counter = 0;  
for (let i = 0; i < 4; i++) {  
  for (let j = 0; j < 2; j++) {  
    counter++;  
  }  
}  
console.log(counter);
```

-

A) 2

-

B) 4

-

C) 8

-

D) 6

48. What is printed by this code?

```
for (let i = 1; i <= 2; i++) {  
  for (let j = 1; j <= 2; j++) {  
    if (i === j) break;  
    console.log(i, j);  
  }  
}
```

- 
- A) 1, 2; 2, 1
- 
- B) 1, 1; 2, 2
- 
- C) 2, 1
- 
- D) Infinite loop

49. What happens in the following nested loop?

```
for (let i = 3; i > 0; i--) {  
  for (let j = 3; j > i; j--) {  
    console.log(i, j);  
  }  
}
```

- 
- A) 3, 2; 2, 1; 1, 0
- 
- B) 2, 3; 1, 2; 1, 3
- 
- C) 1, 2; 1, 3
- 
- D) 3, 2; 3, 1
- 
- E) 23 13 12

50. How many total times does the loop run in this code?

```
for (let i = 0; i < 3; i++) {  
  for (let j = 0; j < 3; j++) {  
    if (i === 2) break;  
    console.log(i, j);  
  }  
}
```

- 
- A) 9
- 
- B) 6
- 
- C) 4
-

D) 5

**Outer loop 3 times**

**Inner loop 7 times**

---