### **Basic Level:**

1. What is the starting point of a basic for loop in JavaScript?
   * 1. for (let i = 1; i < 10; i++)
     2. for (let i = 0; i < 10; i++)
     3. for (let i = 0; i <= 10; i++)
     4. for (let i = 1; i <= 10; i++)
2. What part of the for loop controls how many times the loop executes?
   * 1. Initialization
     2. Condition
     3. Increment/Decrement
     4. All of the above
3. What will be the output of the loop?

* for (let i = 0; i < 5; i++) {  
   console.log(i);  
  }
  + 1. 0, 1, 2, 3, 4
    2. 1, 2, 3, 4, 5
    3. 1, 2, 3, 4
    4. 0, 1, 2, 3, 4, 5

1. Can a for loop be used without a condition?
   * 1. Yes
     2. No
2. What is the significance of the increment part of the for loop?
   * 1. It checks the condition.
     2. It initializes the loop.
     3. It changes the loop variable each iteration.
     4. It ends the loop.
3. What will be the output of the following code?

* for (let i = 5; i > 0; i--) {  
   console.log(i);  
  }
  + 1. 5, 4, 3, 2, 1
    2. 1, 2, 3, 4, 5
    3. 4, 3, 2, 1
    4. 5, 4, 3, 2, 1, 0

1. Can the loop variable be modified inside the for loop body?
   * 1. Yes
     2. No
2. What happens if the condition in the for loop is always true?
   * 1. Loop runs indefinitely.
     2. Loop will never run.
     3. Loop runs once.
     4. Loop exits immediately.
3. What does the loop do?

* for (let i = 3; i < 10; i += 2) {  
   console.log(i);  
  }
  + 1. 3, 5, 7, 9
    2. 4, 6, 8, 10
    3. 5, 7, 9
    4. 3, 4, 5, 6

1. What will happen in this code?

* for (let i = 0; i < 3; i++) {  
   let i = 5;  
   console.log(i);  
  }
  + 1. 0, 1, 2
    2. 5, 5, 5
    3. Error
    4. Infinite loop

### **Intermediate Level:**

1. What is the scope of the variable i in a for loop?
   * 1. Global
     2. Local to the block
     3. Local to the function
     4. None
2. Which of the following is a valid for loop?
   * 1. for (let i = 0;; i++)
     2. for (let i = 0, i < 5, i++)
     3. for (i = 0; i < 5; i++)
     4. for (i == 0; i < 5; i++)
3. How can you skip the current iteration in a for loop?
   * 1. continue;
     2. break;
     3. return;
     4. exit;
4. How can you stop the execution of a for loop before it completes all iterations?
   * 1. continue;
     2. stop;
     3. break;
     4. exit;
5. What happens if the increment is missing in the for loop?
   * 1. Infinite loop
     2. Syntax error
     3. Loop runs once
     4. No iteration occurs
6. What will be the output?

* for (let i = 0; i < 5; i += 2) {  
   console.log(i);  
  }
  + 1. 0, 1, 2, 3, 4
    2. 0, 2, 4
    3. 0, 2
    4. 2, 4

1. What will happen?

* for (let i = 0; i < 3; i++)  
   for (let j = 0; j < 2; j++)  
   console.log(i + j);
  + 1. 0, 1, 1, 2, 2, 3
    2. 0, 1, 1, 2, 2, 3, 3
    3. 0, 1, 1, 2, 2, 3, 3, 4
    4. 0, 1, 2, 3, 4

1. What will the following loop output?

* for (let i = 0; i <= 10; i++) {  
   if (i === 5) break;  
   console.log(i);  
  }
  + 1. 0, 1, 2, 3, 4
    2. 0, 1, 2, 3, 4, 5
    3. 0, 1, 2, 3, 4, 5, 6
    4. 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

1. What will the following code do?

* for (let i = 1; i <= 10; i \*= 2) {  
   console.log(i);  
  }
  + 1. 1, 2, 4, 8
    2. 1, 3, 5, 7, 9
    3. 2, 4, 8
    4. 1, 2, 3, 4

1. What will this for loop do?

* for (let i = 10; i >= 0; i -= 3) {  
   console.log(i);  
  }
  + 1. 10, 7, 4, 1
    2. 10, 8, 6, 4
    3. 10, 9, 8, 7
    4. Error

### **Advanced Level:**

1. How many times will the following loop run?

* for (let i = 0; i !== 10; i += 3) {  
   console.log(i);  
  }
  + 1. 4
    2. 5
    3. 6
    4. Infinite

1. What will this loop print?

* for (let i = 0; i < 3; i++) {  
   if (i % 2 === 0) continue;  
   console.log(i);  
  }
  + 1. 1, 2
    2. 0, 2
    3. 1
    4. 0, 1, 2

1. Can the for loop header be empty?

* for (;;) {  
   // some code  
  }
  + 1. Yes
    2. No

1. How can the following code be corrected?

* for (let i = 0; i < 5 i++) {  
   console.log(i);  
  }
  + 1. Add a semicolon after i++.
    2. Remove let.
    3. Add a comma between statements.
    4. Add parentheses around i++.

1. What is the output?

* for (let i = 0; i <= 3; i++, console.log(i));
  + 1. 1, 2, 3, 4
    2. 0, 1, 2, 3, 4
    3. 0, 1, 2, 3
    4. 1, 2

, 3

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

* let i;  
  for (i = 0; i < 5; i++) {}  
  console.log(i);
  + 1. 4
    2. 5
    3. 6
    4. Undefined

1. What will happen in this loop?

* for (let i = 0; i < 10; i = i + 3) {  
   console.log(i);  
  }
  + 1. 0, 3, 6, 9
    2. 1, 4, 7, 10
    3. Infinite loop
    4. Syntax error

1. How many times will this loop run?

* for (let i = 5; i <= 10; i += 2) {}
  + 1. 3
    2. 4
    3. 5
    4. Infinite

1. What will the following code print?

* for (let i = 0; i < 10; i++) {  
   if (i % 3 === 0) {  
   console.log(i);  
   }  
  }
  + 1. 1, 2, 3, 6, 9
    2. 3, 6, 9
    3. 0, 3, 6, 9
    4. 0, 2, 4, 6

1. What happens when the loop has no initialization?

* for (; i < 5; i++) {  
   console.log(i);  
  }
  + 1. Error
    2. Infinite loop
    3. 0, 1, 2, 3, 4
    4. Depends on the scope of i

1. What will the following code do?

* for (let i = 1; i < 20; i \*= 3) {  
   console.log(i);  
  }
  + 1. 1, 3, 9
    2. 1, 2, 4, 8
    3. 1, 3, 6, 9
    4. Infinite loop

1. How does the for loop differ from the while loop in terms of syntax?
   * 1. Initialization happens outside the loop in while.
     2. while loop is more optimized.
     3. for loop doesn’t require a condition.
     4. while loop can’t be nested.
2. What will happen if there is no update statement in the for loop?
   * 1. Loop will run once.
     2. Infinite loop.
     3. Loop won’t run at all.
     4. Syntax error.
3. How many times does this loop run?

* for (let i = 0; i++ < 5;) {}
  + 1. 4
    2. 5
    3. 6
    4. Infinite

1. What is the result of this code?

* for (let i = 5; i; i--) {  
   console.log(i);  
  }
  + 1. 4, 3, 2, 1
    2. 5, 4, 3, 2, 1
    3. 4, 3, 2, 1, 0
    4. Infinite loop

1. What will the following loop print?

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

1. 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);  
   }  
  }
  + 1. 4
    2. 7
    3. 12
    4. 10

1. 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);  
   }  
  }
  + 1. 15
    2. 10
    3. 12
    4. 20

1. 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);  
   }  
  }
  + 1. 2, 1; 3, 1; 3, 2; 4, 1; 4, 2; 4, 3
    2. 2, 1; 3, 2; 4, 3
    3. 2, 2; 3, 3; 4, 4
    4. 1, 2; 2, 3

1. 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);  
   }  
  }
  + 1. 9
    2. 6
    3. 5
    4. 3

1. 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);
  + 1. “000 011 022”
    2. “00 01 02 10 11 12 20 21 22”
    3. “012 012 012”
    4. Infinite loop

1. 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);  
   }  
   }  
  }
  + 1. 1, 3; 2, 2
    2. 1, 1; 2, 3
    3. 2, 1; 1, 2
    4. 1, 2; 2, 1

1. 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);  
   }  
  }
  + 1. 0, 0; 1, 0; 2, 0
    2. 0, 1; 1, 1; 2, 1
    3. 0, 1; 1, 0
    4. Infinite loop

1. 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);  
   }  
  }
  + 1. 1, 1; 1, 2; 2, 1; 2, 2; 3, 1; 3, 2
    2. 1, 1; 1, 2; 3, 1; 3, 2
    3. 1, 2; 2, 1; 3, 2
    4. Infinite loop

1. 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);
  + 1. “11 12 13 22 23 33”
    2. “12 23 34”
    3. “12 13 23”
    4. Infinite loop

1. 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);  
   }  
  }
  + 1. 10
    2. 5
    3. 4
    4. 8

1. 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);
  + 1. 2
    2. 4
    3. 8
    4. 6

1. 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);  
   }  
  }
  + 1. 1, 2; 2, 1
    2. 1, 1; 2, 2
    3. 2, 1
    4. Infinite loop

1. 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);  
   }  
  }
  + 1. 3, 2; 2, 1; 1, 0
    2. 2, 3; 1, 2; 1, 3
    3. 1, 2; 1, 3
    4. 3, 2; 3, 1

1. 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);  
   }  
  }
  + 1. 9
    2. 6
    3. 4
    4. 5