



# 30 JavaScript.

## ### 30 JavaScript Challenging Questions to Boost Your Problem Solving Skills

1. Write a function to find the factorial of a given number.
2. Implement a function that checks if a given string is a palindrome.
3. Create a function to reverse a linked list.
4. Write a program to find the nth Fibonacci number using recursion.
5. Implement a function to detect a cycle in a directed graph.
6. Write a function that calculates the power of a number without using the `\*\*` operator or built-in functions.
7. Create a program to find the largest prime number less than a given number.
8. Implement a function to flatten a nested array.
9. Write a function to find the longest substring without repeating characters.
10. Create a program to find the intersection of two arrays.
11. Implement a function to perform matrix multiplication.
12. Write a program to implement a binary search algorithm.
13. Implement a function to find the shortest path between two nodes in a graph (Dijkstra's algorithm).
14. Create a function to check if a given string is an anagram of another string.
15. Write a program to sort an array using the quicksort algorithm.
16. Implement a function to check if a binary tree is a binary search tree.
17. Write a function to reverse words in a sentence without reversing the entire sentence.

18. Create a program to find the first non-repeating character in a string.
19. Implement a function to perform a depth-first search (DFS) on a graph.
20. Write a program to check if a given number is a prime number.
21. Create a function to calculate the square root of a number without using built-in functions.
22. Implement a function to rotate a matrix 90 degrees clockwise.
23. Write a program to find the longest common subsequence between two strings.
24. Create a function to generate all possible permutations of a string.
25. Implement a function to perform a breadth-first search (BFS) on a graph.
26. Write a program to reverse a stack without using extra data structures.
27. Implement a function to check if a string contains valid parentheses.
28. Create a program to find the kth largest element in an unsorted array.
29. Write a function to convert a Roman numeral to an integer.
30. Implement a function to solve the N-Queens puzzle.

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