

ANSWER 5-

The `let` and `const` keywords in JavaScript are used to declare variables, but they have some important differences. Here's a breakdown of the differences between `let` and `const`:

Mutability: Variables declared with `let` can be reassigned a new value. In other words, you can assign a different value to a `let` variable after its initial assignment. Variables declared with `const` are read-only, meaning they cannot be reassigned once a value is assigned. The value remains constant throughout the program's execution.

Initialization: Variables declared with `let` can be declared without an initial value. You can declare a `let` variable and assign a value to it later in your code. Variables declared with `const` must be initialized with a value at the time of declaration. You cannot declare a `const` variable without assigning it a value. **Scope:** Both `let` and `const` have block-level scope, which means they are limited to the block of code they are declared in (e.g., within curly braces `{}`). Variables declared with `let` or `const` are not accessible outside of their block scope.

Hoisting: Variables declared with `let` are hoisted to the top of their block scope, but they remain uninitialized until their declaration. This means you cannot access or use a `let` variable before its declaration in the code. Variables declared with `const` are also hoisted but remain in the Temporal Dead Zone (TDZ) until they are actually declared. Accessing a `const` variable before its declaration will throw a runtime error.

Reassignment and Reference: `let` variables can be reassigned a new value, allowing you to change their value throughout the code. `const` variables cannot be reassigned. Once a value is assigned to a `const` variable, it remains constant, and any attempt to reassign it will result in an error. However, it's important to note that `const` does not make objects or arrays immutable. While you cannot reassign the entire

object or array to a new value, you can still modify their properties or elements.

In summary, `let` allows for variable reassignment and is suitable for variables whose values can change over time. `const` provides immutability, ensuring that a variable's value remains constant once assigned. It is useful for declaring values that should not be changed. Choose between `let` and `const` based on whether you need the ability to reassign a variable or require a constant value.