

## Quiz

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### **1. What is the scope of a `var` variable in TypeScript?**

- a) Block scope
  - b) Function scope
  - c) Module scope
  - d) Class scope
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### **2. Which keyword allows variable redeclaration in TypeScript?**

- a) `var`
  - b) `let`
  - c) `const`
  - d) None of the above
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### **3. What is the output of the following code?**

```
var x = 10;  
var x = 20;  
console.log(x);
```

- a) 10
  - b) 20
  - c) Error: Cannot redeclare variable
  - d) Undefined
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### **4. What is the scope of a `let` variable?**

- a) Function scope
  - b) Global scope
  - c) Block scope
  - d) Both a and c
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## **5. Can a `let` variable be reinitialized?**

- a) Yes
  - b) No
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## **6. What happens if you try to redeclare a `let` variable in the same scope?**

- a) It works fine
  - b) It throws an error
  - c) The previous value is overwritten
  - d) Undefined behavior
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## **7. What is the output of the following code?**

```
let y = 5;  
y = 10;  
console.log(y);
```

- a) 5
  - b) 10
  - c) Error: Cannot reassign
  - d) Undefined
- 

## **8. What is the output of the following code?**

```
let a = 100;  
let a = 200;  
console.log(a);
```

- a) 100
  - b) 200
  - c) Error: Cannot redeclare block-scoped variable
  - d) Undefined
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## **9. Can a `const` variable be reinitialized?**

- a) Yes
  - b) No
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**10. What happens if you do not assign a value to a `const` variable at the time of declaration?**

- a) It gets assigned `undefined`
  - b) It throws an error
  - c) It gets assigned `null`
  - d) It works fine without an error
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**11. What is the output of the following code?**

```
const num;  
num = 30;  
console.log(num);
```

- a) 30
  - b) Undefined
  - c) Error: Missing initializer in `const` declaration
  - d) Null
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**12. What is the scope of a `const` variable?**

- a) Function scope
  - b) Block scope
  - c) Global scope
  - d) Both b and c
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**13. Which keyword should be used when you do not want a variable to be reassigned?**

- a) `var`
  - b) `let`
  - c) `const`
  - d) Both `let` and `const`
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**14. What happens if you try to reassign a `const` variable?**

- a) The previous value is overwritten
- b) It throws an error

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- c) The value remains unchanged
  - d) The variable is set to undefined
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### **15. Which of the following statements about var, let, and const is TRUE?**

- a) var is block-scoped
  - b) let variables can be redeclared in the same scope
  - c) const variables must be initialized at the time of declaration
  - d) let variables cannot be reinitialized
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### **Answers:**

1. b) Function scope
2. a) var
3. b) 20
4. c) Block scope
5. a) Yes
6. b) It throws an error
7. b) 10
8. c) Error: Cannot redeclare block-scoped variable
9. b) No
10. b) It throws an error
11. c) Error: Missing initializer in const declaration
12. d) Both b and c
13. c) const
14. b) It throws an error
15. c) const variables must be initialized at the time of declaration