

Quiz

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

- 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**