

TypeScript Data Types and Operators - Quiz

1. What is a key difference between JavaScript and TypeScript?

- a) JavaScript is statically typed, TypeScript is dynamically typed
- b) JavaScript is dynamically typed, TypeScript is statically typed
- c) Both are dynamically typed
- d) Both are statically typed

2. What happens when you assign a string to a number variable in TypeScript?

- a) No error, TypeScript allows it
- b) Error: Type mismatch
- c) It converts the string to a number
- d) It converts the number to a string

3. Which of the following is NOT a primitive data type in TypeScript?

- a) number
- b) boolean
- c) array
- d) string

4. What is the output of `console.log("5" + 3);` in JavaScript?

- a) 8
- b) "53"
- c) 5
- d) Error

5. What does the any type in TypeScript do?

- a) Forces strict typing
- b) Disables type checking
- c) Converts all values to strings
- d) Throws an error on type mismatch

6. What is the inferred type of `let value = 10;` in TypeScript?

- a) number
- b) string
- c) boolean
- d) any

7. Which symbol is used for Union Types in TypeScript?

- a) &
- b) |
- c) \$
- d) #

8. What is the default value of an uninitialized variable in TypeScript?

- a) null
- b) 0
- c) undefined
- d) false

9. Which operator is used for exponentiation in TypeScript?

- a) ^
- b) **
- c) *
- d) //

10. What does the void type in TypeScript indicate?

- a) The function returns an integer
- b) The function returns nothing
- c) The function returns a string
- d) The function throws an error

11. Which of the following is a correct way to declare a boolean in TypeScript?

- a) let flag: boolean = true;
- b) let flag = Boolean(true);
- c) let flag: bool = true;
- d) let flag: boolean = "true";

12. What is the result of 10 % 3 in TypeScript?

- a) 1
- b) 3
- c) 10
- d) 0

13. Which of the following is NOT a comparison operator in TypeScript?

- a) ==
- b) ===
- c) =
- d) !==

14. What is the function of the ! (NOT) operator?

- a) Converts a boolean to its opposite value
- b) Multiplies numbers
- c) Checks for strict equality
- d) Converts a string to a number

15. What does x++ do?

- a) Increments x by 2
- b) Increments x by 1 after the expression is evaluated

- c) Increments x by 1 before the expression is evaluated
- d) Doubles the value of x

16. What does `x += 5` mean?

- a) `x = x + 5`
- b) `x = 5`
- c) `x = x * 5`
- d) `x = x / 5`

17. Which operator checks both value and type equality?

- a) `==`
- b) `====`
- c) `!=`
- d) `=`

18. What is the result of `true && false`?

- a) true
- b) false
- c) null
- d) undefined

19. Which operator returns true if at least one condition is true?

- a) `&&`
- b) `||`
- c) `!`
- d) `====`

20. Which type should be used when a function does not return any value?

- a) number
- b) undefined
- c) any
- d) void

21. What is the main advantage of TypeScript over JavaScript?

- a) More complex syntax
- b) Static typing for better error detection
- c) It runs faster than JavaScript
- d) Requires no compilation

22. What is the correct way to declare an array in TypeScript?

- a) `let numbers: number[] = [1, 2, 3];`
- b) `let numbers = new Array(1, 2, 3);`
- c) `let numbers: array = [1, 2, 3];`
- d) `let numbers: Array[number] = [1, 2, 3];`

23. What is a tuple in TypeScript?

- a) A function
- b) An array with fixed types and order
- c) A class instance
- d) A primitive type

24. What will console.log(10 >= 5) print? a) true

- b) false
- c) undefined
- d) NaN

25. Which operator is used for conditional (ternary) expressions?

- a) &&
- b) ||
- c) ?:
- d) ===

26. What is the result of 5 === "5"?

- a) true
- b) false
- c) Error
- d) undefined

27. Which keyword is used to declare a constant variable in TypeScript?

- a) var
- b) let
- c) const
- d) static

28. Which of the following is NOT a valid TypeScript data type?

- a) string
- b) number
- c) bool
- d) undefined

29. What is the result of typeof null in JavaScript?

- a) "null"
- b) "object"
- c) "undefined"
- d) "number"

30. How do you declare a function that returns a number?

- a) function getNumber(): number { return 5; }
- b) function getNumber { return 5; }
- c) function getNumber() { return 5; }
- d) function getNumber(): void { return 5; }

Answers:

1. b 2) b 3) c 4) b 5) b 6) a 7) b 8) c 9) b 10) b
2. a 12) a 13) c 14) a 15) b 16) a 17) b 18) b 19) b 20) d
3. b 22) a 23) b 24) a 25) c 26) b 27) c 28) c 29) b 30) a