

# Basic JavaScript Exercises

## Basic Understanding

**Note:** Solutions should be provided in text; you don't need to run the code.

### 1. Variable Assignment and Arithmetic:

If `const a = 8` and `const b = 2`, what is the result of `a * b + 3`?

### 2. Order with Variables:

Given `const x = 4`, `y = 2`, `z = 3`, evaluate the expression `x + y * z - 1`.

### 3. Parentheses Impact:

If `const a = 4` and `const b = 2`, what is the result of `(a + b) * (b - 1)`?

### 4. Expression with Variables:

If `const num = 50`, `const x = 5`, and `const y = 6`, what is the result of `num - x * y`?

### 5. Mixing Operations:

Given `const a = 8`, `const b = 2`, and `const c = 4`, evaluate `a / b * c`.

### 6. Predicting Results with Different Operation Orders:

If `const a = 2`, `const b = 3`, and `const c = 4`, predict the result of `a + b * c` and `(a + b) * c`.

### 7. Nested Parentheses:

Given `const a = 2`, `const b = 3`, and `const c = 5`, calculate `((a + b) * c) / 2`.

### 8. Complex Variable Expression:

If `const a = 3`, `const b = 6`, `const c = 5`, and `const d = 4`, determine the result of `a + b * (c + d) / b - d`.

## Intermediate Understanding

### 9. Mixing Strings and Numbers:

If `const num = 2` and `const str = '3'`, evaluate the expression `num + str * 4`.

### 10. String and Number Operations:

Consider `const a = 10`, `const b = 20`, and `const c = "30"`.  
Predict the results of `a + b + c` and `c + a + b`.

### 11. Unary Plus with Variables:

If `const numStr = '3'` and `const num = 10`, what is the result of `+numStr + num`?

### 12. Post-increment in Expression:

Given `let x = 10`, evaluate `x++ * 2` and state the final value of `x` after the operation.

### 13. Division by Zero in Variable:

If `const a = 10`, what does JavaScript output when you calculate `a / 0`?

### 14. Modulus Operator with Variables:

Given `const a = 15` and `const b = 4`, evaluate `a % b`.