

JavaScript Math Ambiguity Notes

Overview

- **Ambiguity:** Math expression order affects results.
- Example: `var totalCost = 1 + 3 * 4;` (is it $(1 + 3) * 4 = 16$ or $1 + (3 * 4) = 13$?).
- **Precedence Rules:** JavaScript prioritizes multiplication over addition (e.g., $1 + 3 * 4 = 13$).

Parentheses

- Use `()` to override precedence and clarify order.
 - $(1 + 3) * 4$ yields 16.
 - $1 + (3 * 4)$ yields 13.
- **Complex Expressions:** Add parentheses for clarity.
 - $((2 * 4) * 4) + 2$ yields 34.
 - $(2 * 4) * (4 + 2)$ yields 48.

Benefits

- Parentheses ensure correct results and improve code readability for others and future self.