

# Warm-Up: What's an AST?

Prepared by Mark on January 25, 2025

Based on a true story.

## Problem 1:

Say we have a valid string of simple arithmetic that contains no unary operators (like  $3!$  or  $-4$ ) and no parenthesis:

$$3 + 9 \times 8 \div 5 \wedge 6$$

You may assume that all numbers and operators in this string consist of exactly one character. Devise an algorithm that turns such strings into a tree (as shown below), respecting the order of operations  $[\wedge, \times, \div, +, -]$ .

