



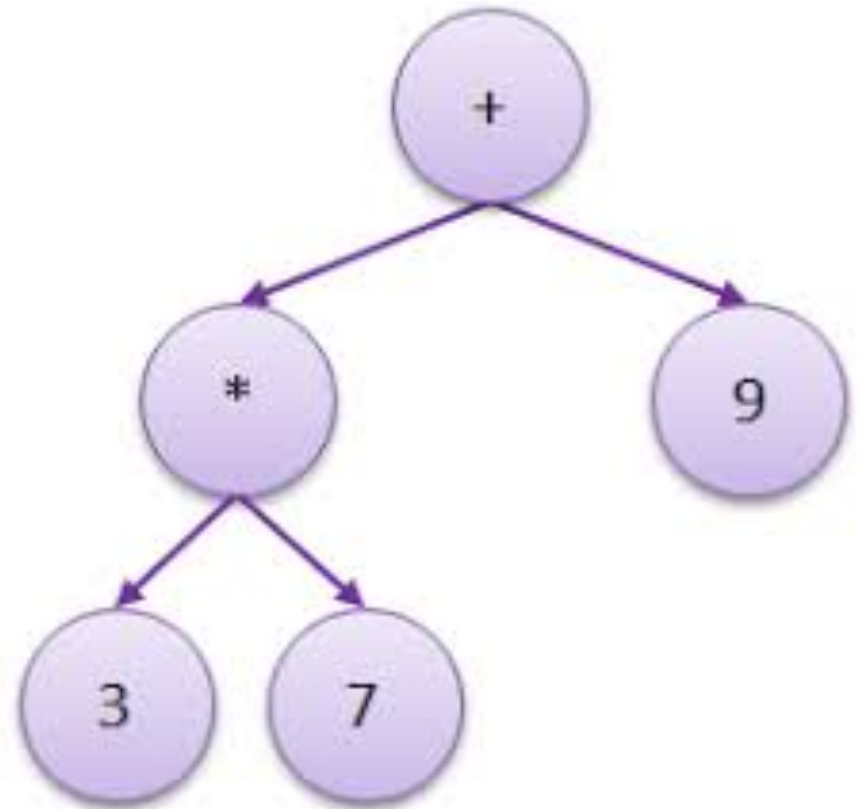
Expression Trees

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Expression Tree

Description of a tree

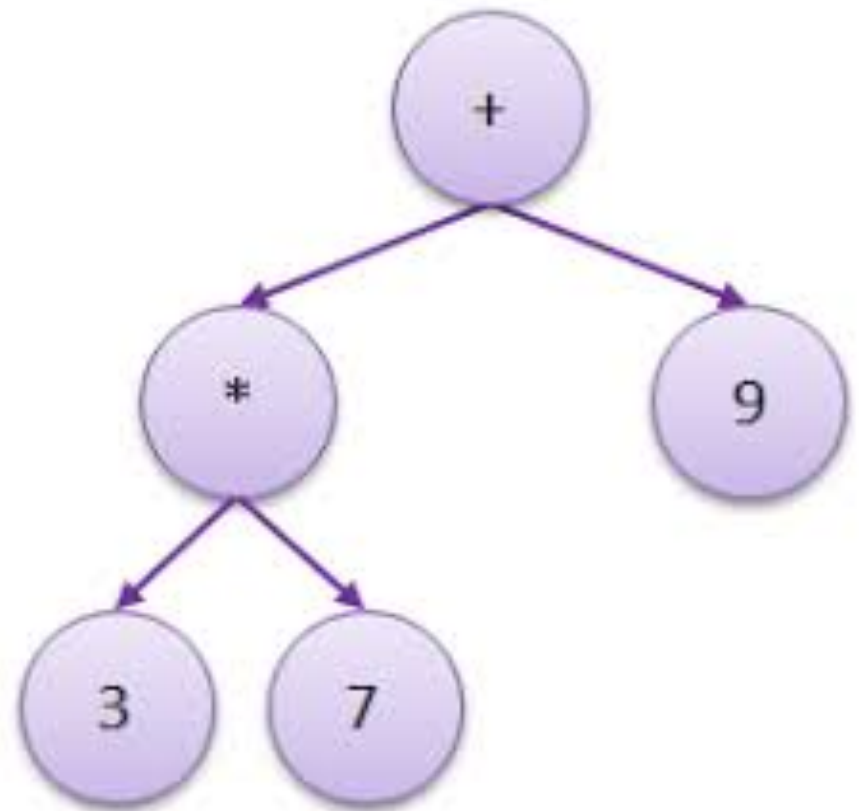
- Each leaf is an operand (ex. number)
- Each parent is an operator (ex. arithmetic)



Expression Tree

Analyze the tree

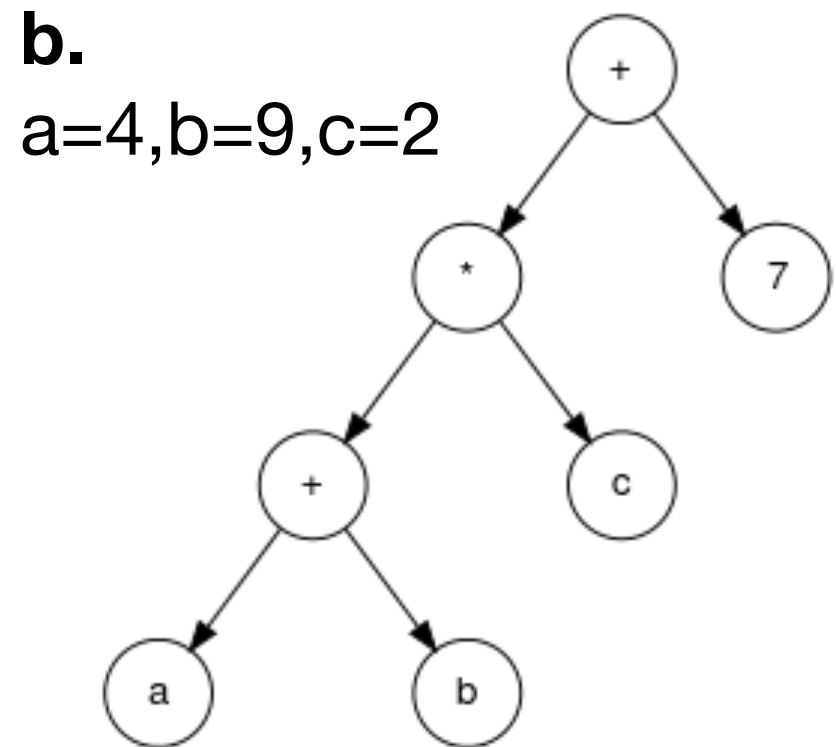
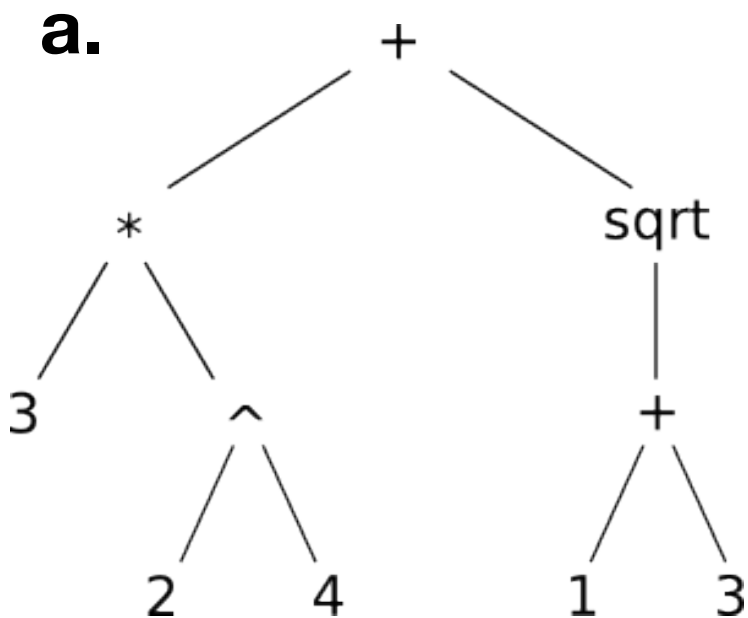
1. Write the expression for the tree
2. Evaluate the result of the tree



Expression Tree

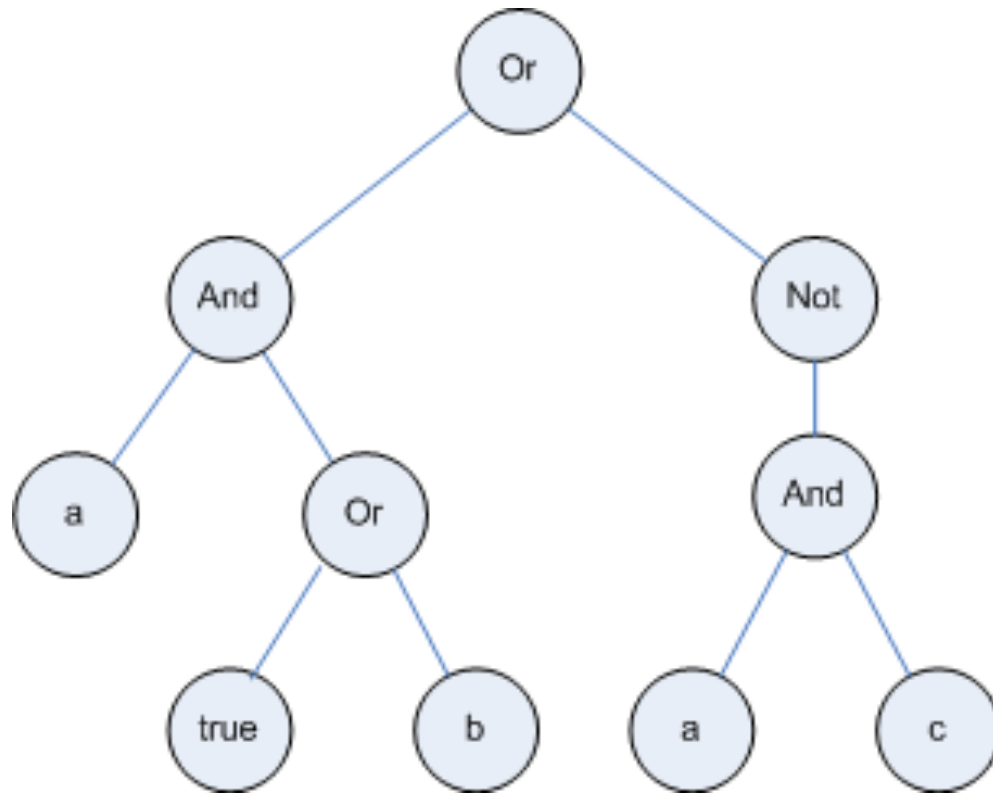
Exercises

1. Write the expression for the tree
2. Evaluate the result of tree



Expression Tree

Boolean Expression Tree



Expression Tree

Create Expression Tree

$$2 + 3 * 4$$

$$(2 + 3) * 4$$

Expression Tree

Create Expression Tree

8 / 4 + (2.1 * (5 + 3.3) % (6 - 1))



Infix to Postfix Notation

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Infix to Postfix

Convert Infix Notation to Postfix

a. $91 / 53 - 52 \% 34 * 22 + 73$

b. $3 ^ (7 ^ 4) ^ 8 \% 27 + 11 / 73 ^ 5$

c. $10 * (97 / (15 / 31 \% 43) - (38 - 34)) + 27$

Infix to Postfix

Convert to Postfix and build Expression tree

55 * (20 - 92) % (12 - 9) ^ 4 + 29

Infix to Postfix

Convert to Postfix and build Expression tree

$$55 * (20 - 92) \% (12 - 9) ^ 4 + 29$$

Answer:

