3) (10 pts) ALG (Stack)
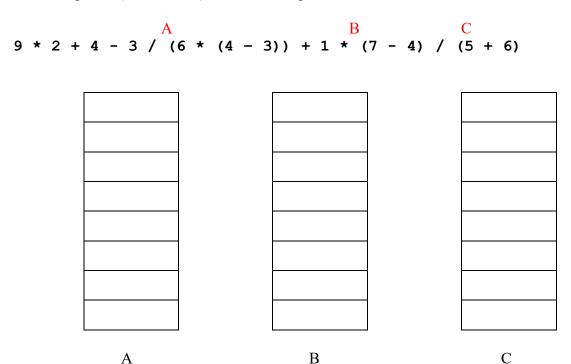
Convert the following infix expression to postfix using a stack. Show the contents of the stack at the indicated points (A, B, and C) in the infix expression.

<div align="center">A   B   C</div>

`9 * 2 + 4 - 3 / (6 * (4 - 3)) + 1 * (7 - 4) / (5 + 6)`

A	B	C

Note: A indicates the location in the expression **AFTER** the division operator and before the open parenthesis. B indicates the location in the expression **AFTER** the multiplication and before the open parenthesis. C indicates the location in the expression **AFTER** the open parenthesis and before the value 5.

Resulting postfix expression:

Note: There are exactly the correct number of boxes above. These should be filled with 12 numbers and 11 operators.

Computer Science Foundation Exam

May 17, 2025

Section B: ADVANCED DATA STRUCTURES

**NO books, notes, or calculators may be used,
and you must work entirely on your own.**

PLEASE USE CAPITAL LETTERS IN WRITING YOUR NAME

Last Name: _____

First Name: _____

UCFID: _____

Question #	Max Pts	Category	Score
1	10	ALG	
2	5	ALG	
3	10	DSN	
TOTAL	25	----	

You must do all 3 problems in this section of the exam.

Problems will be graded based on the completeness of the solution steps and <u>not</u> graded based on the answer alone. Credit cannot be given unless all work is shown and is readable. Be complete, yet concise, and above all <u>be neat</u>. For each coding question, assume that all of the necessary includes (stdlib, stdio, math, string) for that particular question have been made.