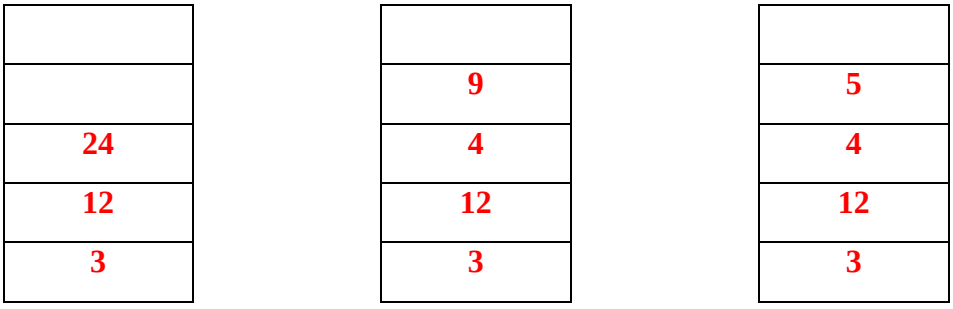
3) (5 pts) ALG (Stacks)

Evaluate the following postfix expression shown below, using the algorithm that utilizes an operand stack. Show the state of the operand stack at each of the indicated points in the expression:

3 4 2 1 + * 24 **A** 6 / 9 **B** 4 - **C** + - /



A **B** **C**

Value of the Postfix Expression: **1**

Grading: 1 pt for each stack (all or nothing), 2 pts for the answer (also all or nothing)

Computer Science Foundation Exam

August 31, 2019

Section I B

DATA STRUCTURES

SOLUTION

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

Name: _____

UCFID: _____

NID: _____

Question #	Max Pts	Category	Score
1	10	DSN	
2	5	ALG	
3	10	ALG	
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.