

Computer Science I – Fall 2010
Recitation #6: Stack Applications – Infix/Postfix

Convert the following INFIX expressions into POSTFIX expressions using stacks (as shown in class).

NOTE: There is a SPECIFIC way that these conversion problems are tested. The TA will do problem 1 for you and show you what is expected of you and what you can expect on a test.

You should keep a “WORKING” stack that you use to solve the problem. Then you will copy the contents of this working stack, when appropriate, into the given stacks (stacks A, B, and C).

$$1) \quad 44 - 15 / (9 - 3 * 2) + 12$$

A B C

$$2) \quad 12 * (8 - 7 + 1) - (4 + 6) / 2$$

A B C

$$3) \quad (3 + 8 + 5 - 10) / 3 + 4 + 5 - 7$$

A B C

$$4) \quad 14 - (6 - 10) - 10$$

A B C

$$5) \quad 16 - (8 + (10 - 7 + 3) * 2 - 10) / ((4 - 2) * 3 - 1)$$

A B C

Evaluate the POSTFIX expressions that you just developed (after the conversion). Use the stack method that we discussed in class.