

COSC 201 ~ 10/24/2011

△ Postfix Notation

↳ all operators come at end of expression

$1 + 2 * 3 \longrightarrow 123 * +$

evaluation of
a postfix
expression

- ① See an operand? push
- ② See an operator? pop appropriate number of symbols, evaluate, and push the result
- ③ See end of file? top is the result

- You need to know nothing about order of operations in order to evaluate a postfix expression

△ Converting Infix to Postfix

while (input has more symbols)

Read a symbol if that symbol is:

operand → immediately output

open paren → push

close paren → pop all symbols until an

open paren appears (pop open paren)

all other operators → pop all stack symbols until a

symbol of lower precedence -OR- a right

associative symbol of equal precedence

appears; push operator

end of input → pop all symbols

pop until you find
that close paren

△ To Recap: Evaluating an Infix Expression

↳ First, convert the infix to postfix

↳ then, evaluate the postfix