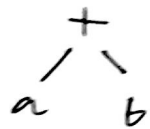


El- Solalah
Comp. Arch.

15-Jan-15
Lab 2

2) infix $a + b$
postfix: $a b +$



3) infix $a + b / 2$
postfix: $a b + 2 \div$

4) $a + b * c / 3$

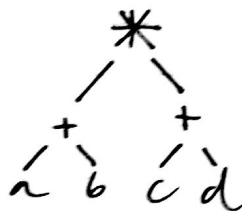
Tree:



Postfix

Infix: $a b + c + 3 \div$

5) Tree:

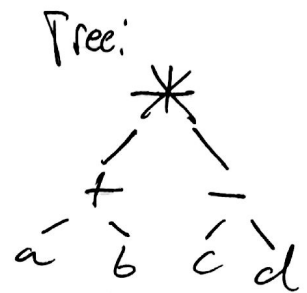


postfix: $a b + c d + *$

6) postfix
 $a b + c d - *$

Infix

$$(a + b) * (c - d)$$



7) $((a b -) a +) c d e * + / f *$

Tree:

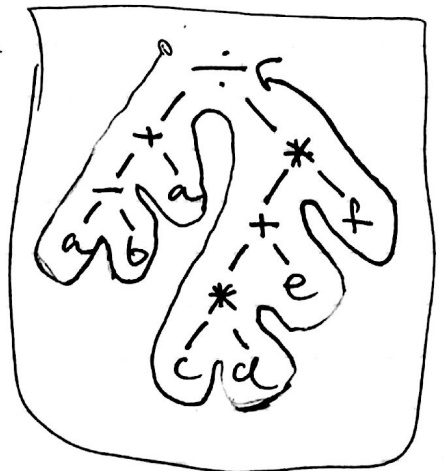
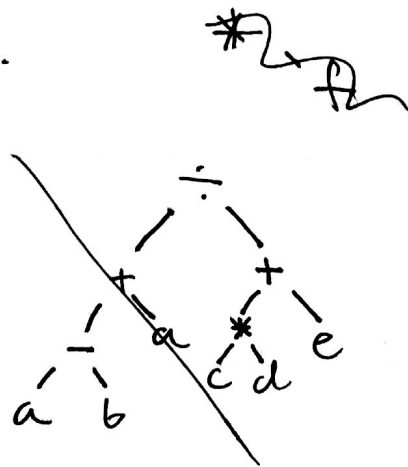
$$a b \quad a \quad c [d e] \quad (a * e)$$

$$(a - b) + a$$

$$((a - b) + a) / (c - d * e) * f$$

$$((a - b) + a) + (d e)$$

Tree:



$$8) \text{ } ^{IF} 28 \ 30 + \ 14 \ 15 - *$$

$$(28 + 30) * (14 - 15)$$

Assembly Fragment for this expression;

$$; X = (28 + 30) * (14 - 15)$$

$$; 28 \ 30 + \ 14 \ 15 - *$$

i const_28
i const_30
i add
i const_14
i const_15
i sub & not real
i mul

; load value 28
; load value 30
; add
; load value 14
; load value 15
; subtract
; multiply

or

ldc
~~r const_28~~
~~r const_30~~
r add
ldc
~~r const_14~~
~~r const_15~~
r neg
r add

r mul

9)

.class public PostFix Expression
.super Java/lang/Object

.method public <init>()V
aload_0

invokespecial Java/lang/Object/<init>()V
return

.end method

.method public static main([Ljava/lang/String;)V
limit stack 10
limit locals 10

getstatic Java/lang/System/out Ljava/io/PrintStream;

ldc 28

ldc 30

iadd

ldc 14

ldc -15

iadd

imul

invokevirtual Java/io/PrintStream/println(I)V

return

.end method