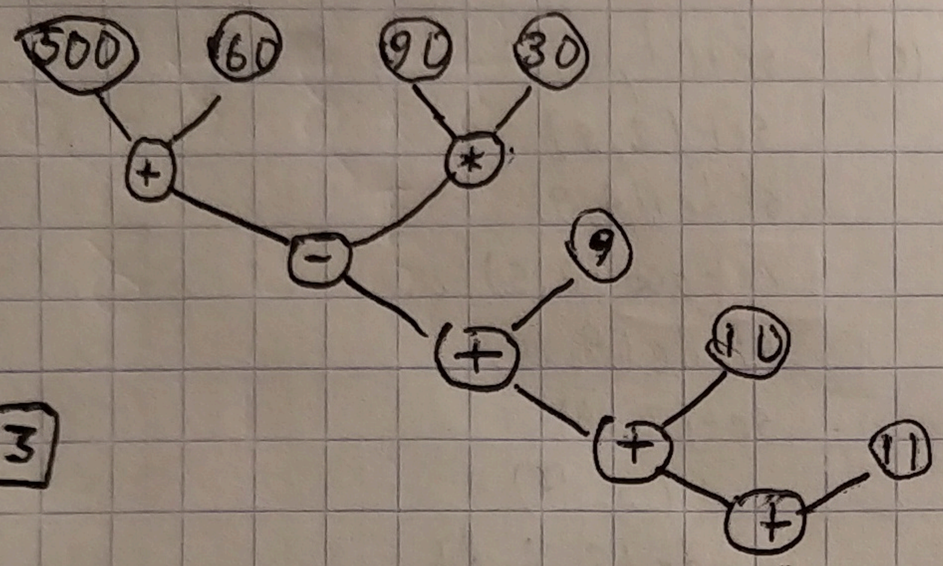
1 (a)
set(1, 1)
set(2, 2)
slide(1,1,2)
remove(2, 2)
set(2, 3)
set(3, 4)
slide(2,3,11)
remove(3, 4)
slide(1, 12, 13)
remove(2, 11)
set(2,5)
set(3,6)
slide(2, 5, 10)
remove(3,6)
set(3,7)
set(4,8)
slide(3,7,9)
remove(4,8)
slide(2,10,14)
remove(3,9)
slide(1,13,15)
remove(2,14)

(b)
set(1,1)
set(2,8)
slide(1,1,2)
remove(2,8)
set(2,9)
slide(1,2,3)
remove(2,9)
set(2,10)
slide(1,3,4)
remove(2,10)
set(2,11)
slide(1,4,5)
remove(2,11)
set(2,12)
slide(1,5,6)
remove(2,12)
set(2,13)
slide(1,6,7)
remove(2,13)

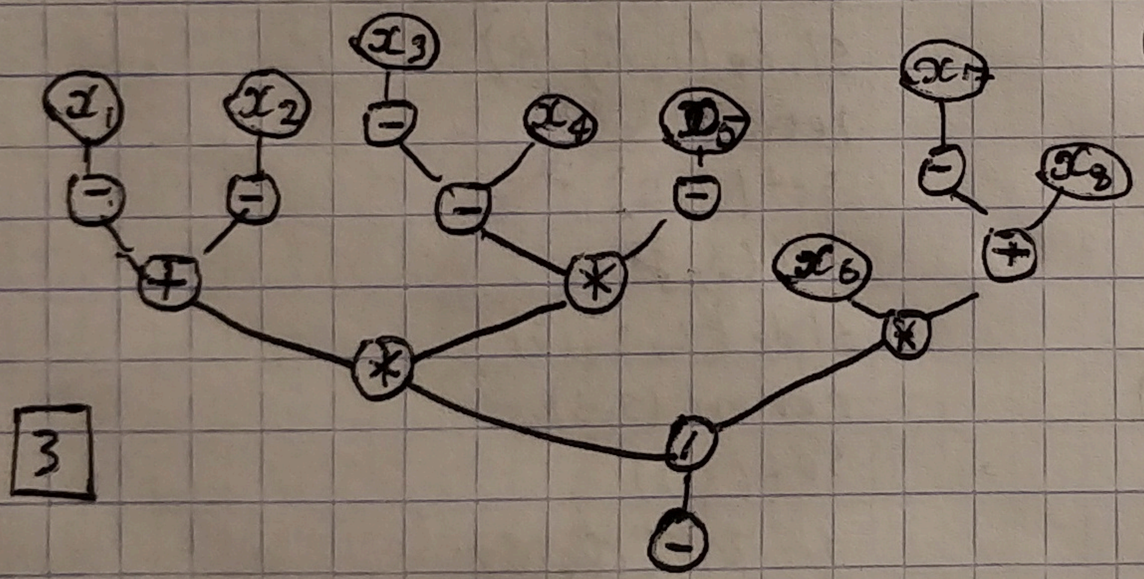
(c)
set(1,4)
set(2,5)
slide(1,4,9)
remove(2,5)
slide(1,9,13)
set(2,6)
set(3,7)
slide(2,6,8)
remove(3,7)
slide(2,8,14)
slide(1,13,15)
remove(2,14)
set(2,2)
set(3,3)
slide(2,2,10)
remove(3,3)
set(3,1)
[illegible]
remove(3,1)
slide(3,1,11)
slide(2,10,12)
remove(3,11)
slide(2,12,16)
slide(1,15,17)
remove(2,16)

2 (a)


500
60
90
30
9
10
11

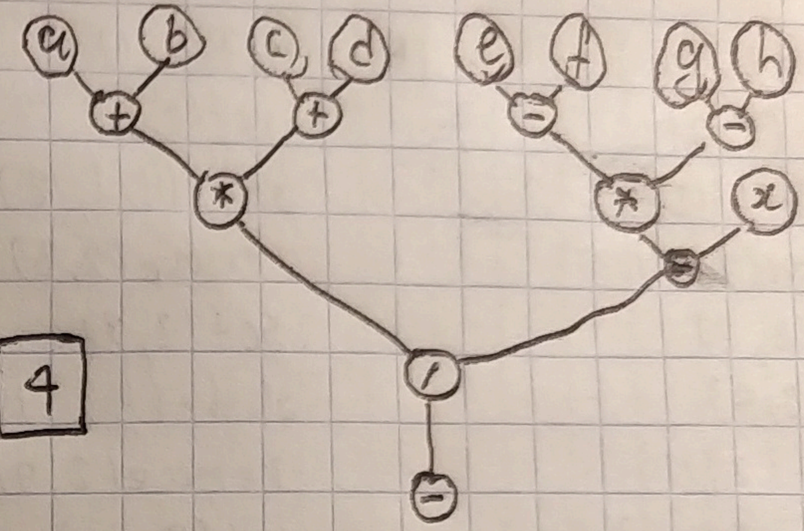
3

(b)


x_1
x_2
x_3
x_4
x_5
x_7
x_8
x_6

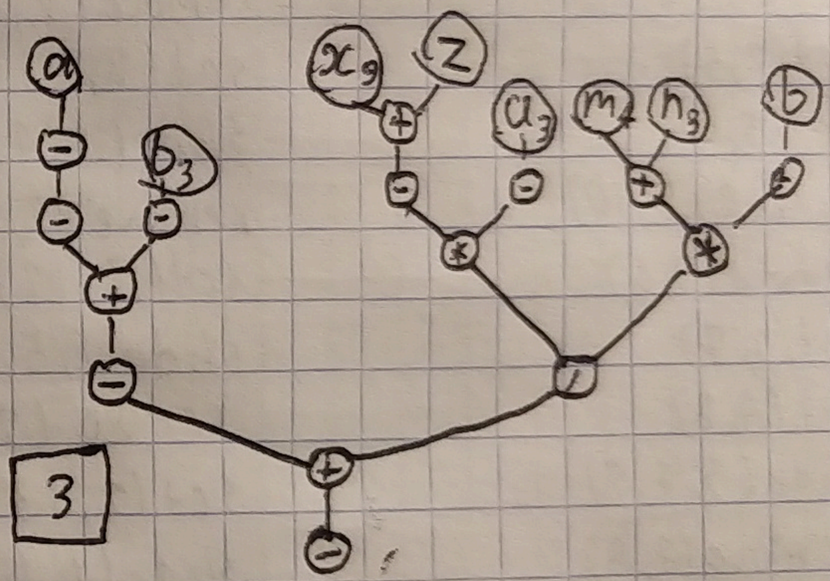
3

(c)


a
b
c
d
e
f
g
h
x

4

(d)


a
b_3
x_9
z
a_3
m_4
h_3
b

3

$$displ(c, \$gm) = sbase +_{32} 0_{32}$$

$$displ(a, \$gm) = sbase +_{32} 44_{32}$$

$$displ(b, \$gm) = sbase +_{32} 48_{32}$$

```
addi    1 28 44             # Load a into 1
lw      1 1 0               #

addi    2 28 48             # Load b into 2
lw      2 2 0               #
lw      2 2 0               # Dereference 2 (b)

add     1 1 2               # Performe addition

addi    2 28 0              # Load c (e) into 2
addi    3 0 2               # gpr(3) = enc(2, uint)
addi    23 0 4              # gpr(23) = enc(4, uint)
mul(3, 3, 23)
add     2 2 3
lw      2 2 0               # Deref c[2]

sub     1 1 2
```