$E \rightarrow E_1 + T \quad E.n = \text{new Node}('+', E_1.n, T.n)$

$E \rightarrow E_1 - T \quad E.n = \text{new Node}('-', E_1.n, T.n)$

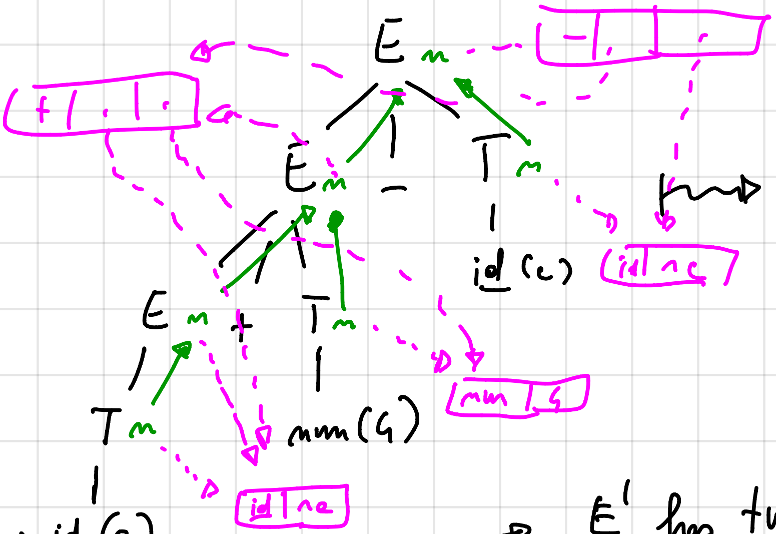
$E \rightarrow T \quad E.n = T.n$

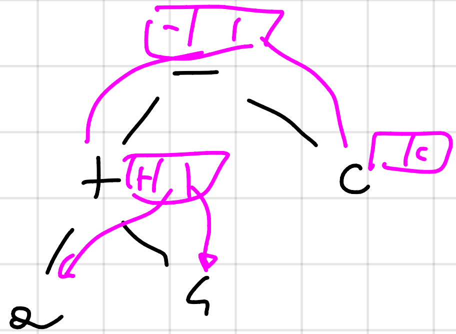
$T \rightarrow (E) \quad T.n = E.n$

$T \rightarrow \underline{id} \quad T.n = \text{new Leaf}(\underline{id}, \underline{id}\ \text{entry})$

$T \rightarrow \underline{num} \quad T.n = \text{new Leaf}(\underline{num}, \underline{num}.\text{value})$

$a - b + c$





E ← A

E' ← R

T ← X

+T / -T ← yid(a)

E' has two attributes: i, n

$E \rightarrow T E'_1$

$E' \rightarrow + T E'_1$

$E' \rightarrow - T E'_1$

$E' \rightarrow \varepsilon$

$T \rightarrow (E)$

$T \rightarrow \underline{id}$

$T \rightarrow \underline{num}$

SDT →

$E \rightarrow T \{ E'.i = T.n \} E' \{ E.n = E'.n \}$

$E' \rightarrow + T \{ E'_1.i = \text{new Node}('+', E'.i, T.n) \}$

$E' \{ E'.n = E'_1.n \}$

$E' \rightarrow - T \{ E'_2.i = \text{new Node}('-', E'.i, T.n) \}$

$E' \{ E'.n = E'_1.n \}$

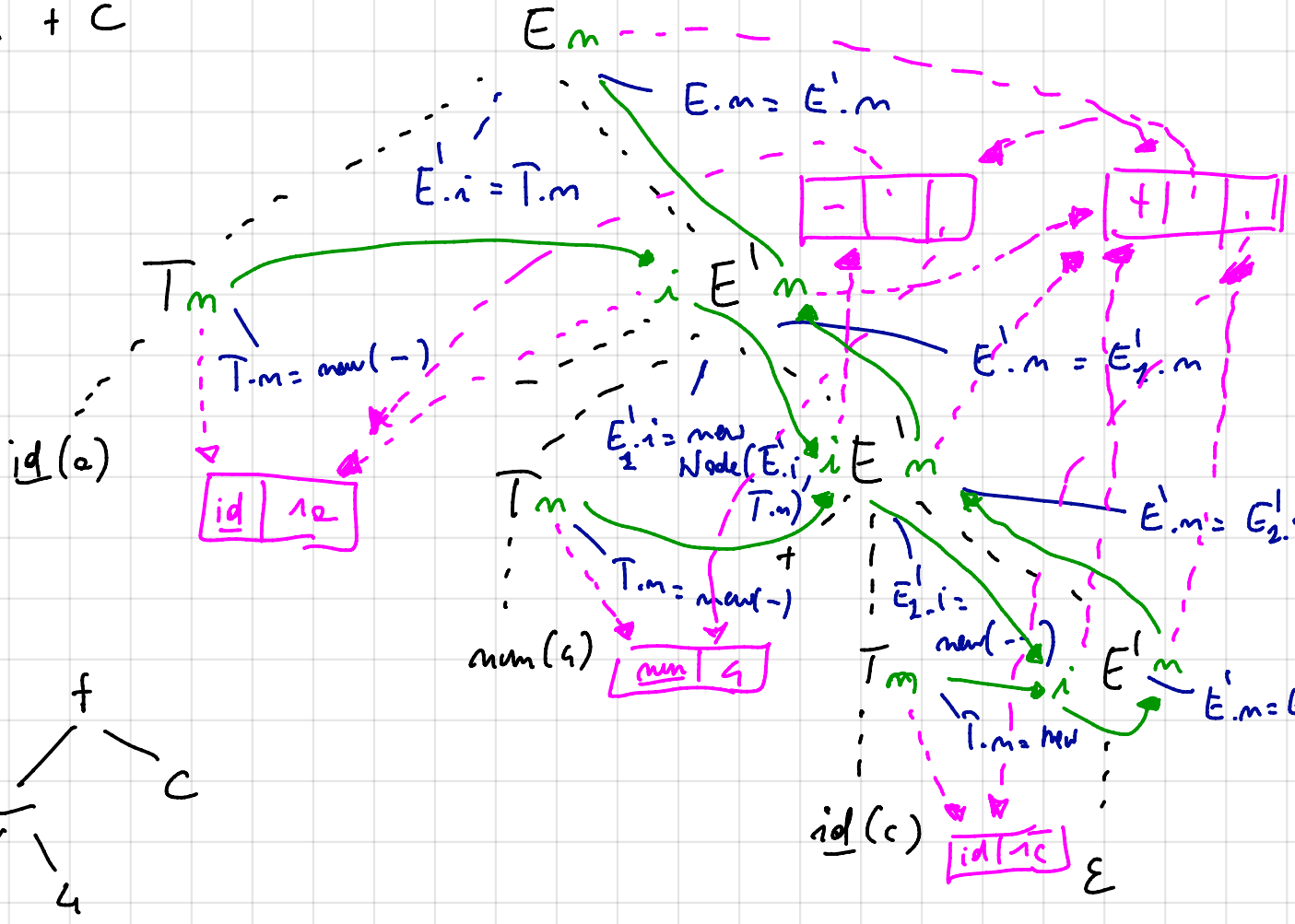
$E' \rightarrow \varepsilon \{ E'.n = E'.i \}$

$T \rightarrow (E) \{ T.n = E.n \}$

$T \rightarrow \underline{id} \{ T.n = \text{new Leaf}(\underline{id}, \underline{id}.\text{entry}) \}$

$T \rightarrow \underline{num} \{ T.n = \text{new Leaf}(\underline{num}, \underline{num}.\text{value}) \}$

a - 4 + c

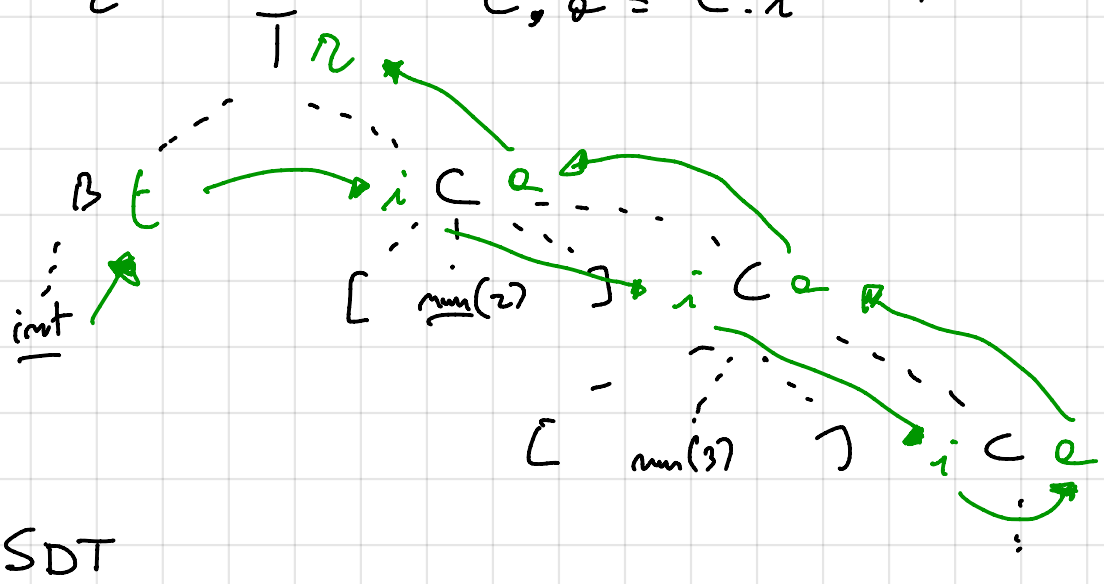

E.n
E.n = E'.n
E'.i = T.n
T.n
E'.n
T.n = new(-)
E'.n = E'1.n
id(a)
id | 'a
E'1.i = new Node(E'.i, T.n)
T.n
E'.n
E'.n = E'2.n
T.n = new(4)
num(4)
num | 4
E'2.i = new(+)
T.n
E'.n
E'.n = E'
T.n = new
id(c)
id | 'c
ε

f
c
a
4

int [2][3] ⟼ array(2, array(3, integer))

int ⟼ integer

T → B C	C.i = B.t, T.a = C.a	SDD L-attributed
B → int	B.t = 'integer'	
B → float	B.t = 'float'	
C → [num] C_1	C_1.i = C.i, C.a = array(num.value, C_1.a)	
C → ε	C.a = C.i	



⇝ SDT

T → B { C.i = B.t } C { T.a = C.a }

B → int { B.t = 'integer' }

B → float { B.t = 'float' }

C → [num] { C_1.i = C.i } C_1 { C.a = array(num.value, C_1.a) }

C → ε { C.a = C.i }

conditionel expressions

S.s = if (T.x > 3) then T.x+1 else B.b