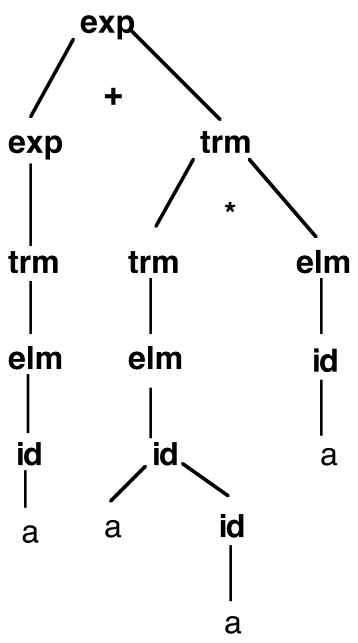
Wren Expressions (simplified)

Grammar production	ADT operation
exp ::= trm	as_exp: trm → exp
exp ::= exp + trm	sum_exp: exp, trm → exp
exp ::= exp - trm	diff_exp: exp, trm → exp
trm ::= elm	as_trm: elm → trm
trm ::= trm * elm	mul_trm: trm, elm → trm
elm ::= num	as_elm: num → elm
elm ::= id	as_elm: id → elm
num ::= dig	as_num: dig → num
num ::= dig num	bld_num: dig, num → num
id ::= a	ida: id
id ::= a id	bld_id: id → id
dig ::= 0	dig0: dig
dig ::= 1	dig1: dig

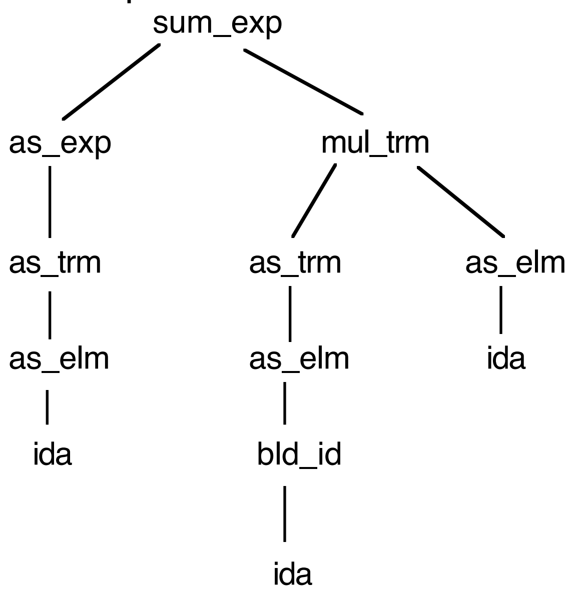
Wren Expressions (simplified)

Then for an expression such as a+aa*a we obtain the following

Derivation tree



ADT expression tree


sum_exp
as_exp
mul_trm
as_trm
as_trm
as_elm
as_elm
as_elm
ida
ida
bld_id
ida