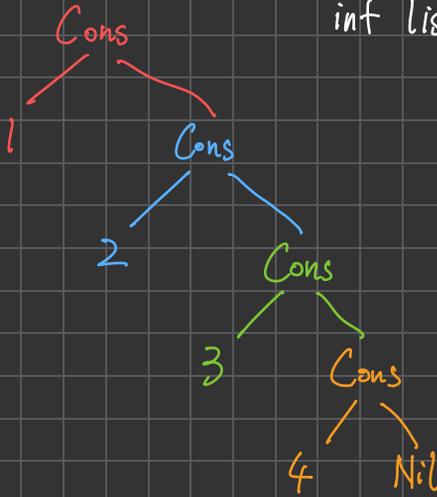
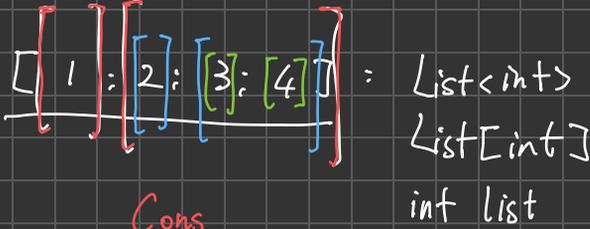


1. Lists / Linked-lists



$$| [\underbrace{\bar{i}32} ; \underbrace{4}] | = | \bar{i}32 |^4$$

$$| \text{Vec} \langle \bar{i}32 \rangle | = | \bar{i}32 |^{u64}$$

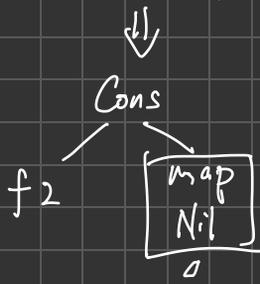
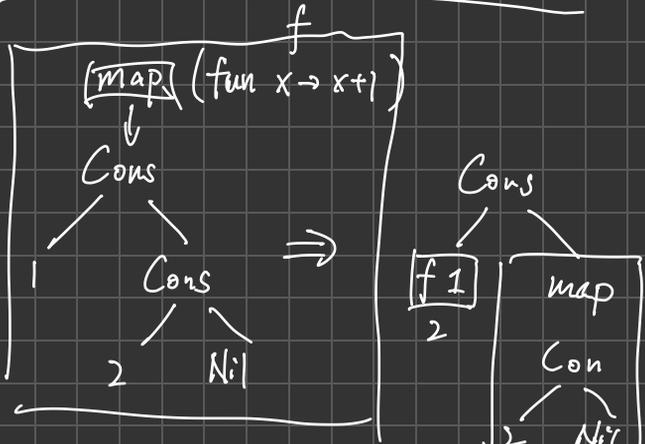
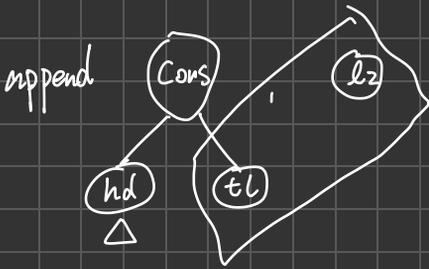
Δ
 $u64$

2. Append l2 l2

Nil, Nil \Rightarrow Nil

Nil, Cons

Cons, Nil

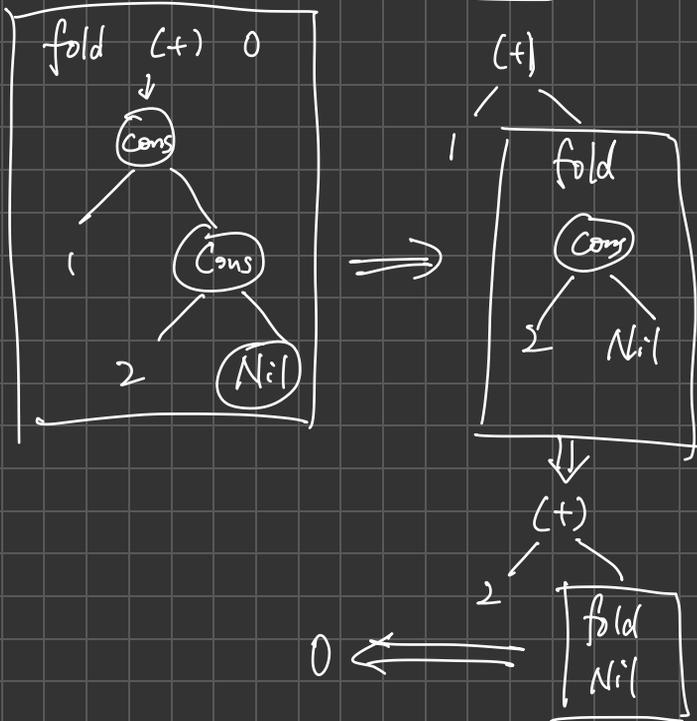


Fold / Reduce

$$\text{sum}([1, 2, 3, 4]) = 10$$

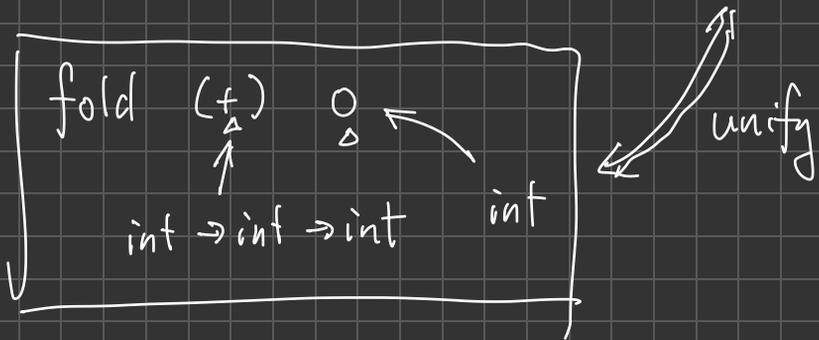
$$\text{avg}([1, 2, 3]) = 2$$

- fold
- prev state curr elem next state
- ↓ ↓ ↓
1. accumulator : 'b' → 'a' → 'b'
 2. base = 'b'
 3. list = 'a list'



fold : ('b → 'a → 'b) → 'b → 'a list → 'b

1st 2nd 3rd



'b ⇒ int

'a ⇒ int