一些常用规则

数学法则

$(x\,:)y$表示$x::y$

数字类

$$x + y = y + x$$

$$x \times y = y \times x$$

$$x + (y + z) = (x + y) + z$$

$$x \times (y \times z) = (x \times y) \times z$$

$$x \times (y + z) = (x \times y)$$

函数式优化

$$(map(f).map(g))xs = (map(f.g))xs$$

$$f.(g.h) = (f.g).h$$

$$map(f)(xs + +ys) = map(f)(xs) + +map(f)(ys)$$

$$map(f).concat = concat.map(map(f))$$

幺半群(f, e)

$$foldr(f,e) = foldr(f,e)$$

长度相关

$$len.(x\,:) = (1+).len$$

$$len.map(f) = len$$

$$len(xs + +ys) == len(xs) + len(ys)$$

$$len.concat == sum.map(len)$$

$$sum(map(1+)(xs)) == len(xs) + sum(xs)$$

$$sum(map(n+)(xs)) == len(xs) * n + sum(xs)$$

$$len.segs = (1 + (n * n + n)/2)$$