Ask me anything

0 questions
0 upvotes

What are the fixed points of \x -> x*x ?

0 and 1

0, 1

0 & 1

x

Of \x -> length [1..x] ?

1

all natural numbers

1

1

x

1

value of x

x >= 1

i correct the one with natural numbers - all positive natural numbers

Of \x -> length [1..x] ?

1, 2, 3, ...

x > =1

Each list [x,y] where x = y

each list [y,z] where y=z

[]

will it output xx? in this case 55 if inputed 5

pair with two identical values

each list [y,z] where y=z

[]

[]

any tuple with identical values

any list with two identical values

list of length 2 with identical values

Of \x -> tail x ++ tail x ?

list with two identical values

no fixed point

Of \x -> x + 1 ?

there is no fixed point

Infinity

there is none

There is none?!

will it look them on the ascii and increase the values of the strings?

What are succ and pred of (Y succ)? What does this represent?

infinity?

Recall:
False = (λxy.y)
succ n = (False,n))
pred = second

Y succ = succ (Y succ)
= (False, (Y succ))

pred (Y succ) = pred (False, (Y succ))
= Y succ

What does Y succ represent?

1

👤

How would you type λx.x ?

(λx{A}.x{A}){A -> A}

(λx{A}.x{A})(A->A)

(lambda x{A}. x{A}) { A-> A}

3

How would you type λf.λx.(f(x)) ?

λf{A->B}.λx{A}.(f(x)){A->B}

λf(A).λx(B).f(x(B))(A)){B->A}

λf{A -> B}.λx{A}.(f(x){A -> B}) {(A->B) -> B}

the whole thing λf.λx.(f(x)){(A->B)->B}

λf{A}.λx{B}.(f(x) {B -> A}) {{A}-> {B} -> {B -> A}}

5

How would you type (λx.x x) ?

(λx{A}.x{A} x{A}) {A} -> {A }

(λx{A -> (B -> C)}.x x){A -> C}

(λx{A}.x{A}x{A}){A->{AA}}

(λx{A -> {A-> {.....}}.x{A -> {A-> {.....}}
x{A -> {A-> {.....}}) ({A -> {A-> {.....}})

4

Last chance for questions