

Evaluation strategies

can - boy - wave

can-by-name

$(\text{fix})f = (f)(\text{fix})f$

$(\backslash xy)(\text{fix})f \rightarrow y$ **for call-by-name**

$(\backslash xy)(\text{fix})f \rightarrow \dots$ **for call-by-value**

$(\text{fix})f \rightarrow (f)(f)(f)\dots$ **for call-by-name**

$(\text{fix})f \rightarrow \dots$ **for call-by-value**

Evaluate arguments first

Evaluate argument when it was called



Krivine Machine

Call-by-name machine that computes β -normal form

Intuitively (p - instruction pointer)

We have a stack, than:

- \x - pop in x; p++
- (- push address of corresponding); p++
- x - go to the address contained in x

Evaluation strategies

call-by-value

Evaluate arguments first

call-by-name

Evaluate argument when it was called

$(\text{fix})f = (f)(\text{fix})f$

$(\lambda xy)(\text{fix})f \rightarrow y$ **for call-by-name**

$(\lambda xy)(\text{fix})f \rightarrow \dots$ **for call-by-value**

$(\text{fix})f \rightarrow (f)(f)(f)\dots$ **for call-by-name**

$(\text{fix})f \rightarrow \dots$ **for call-by-value**