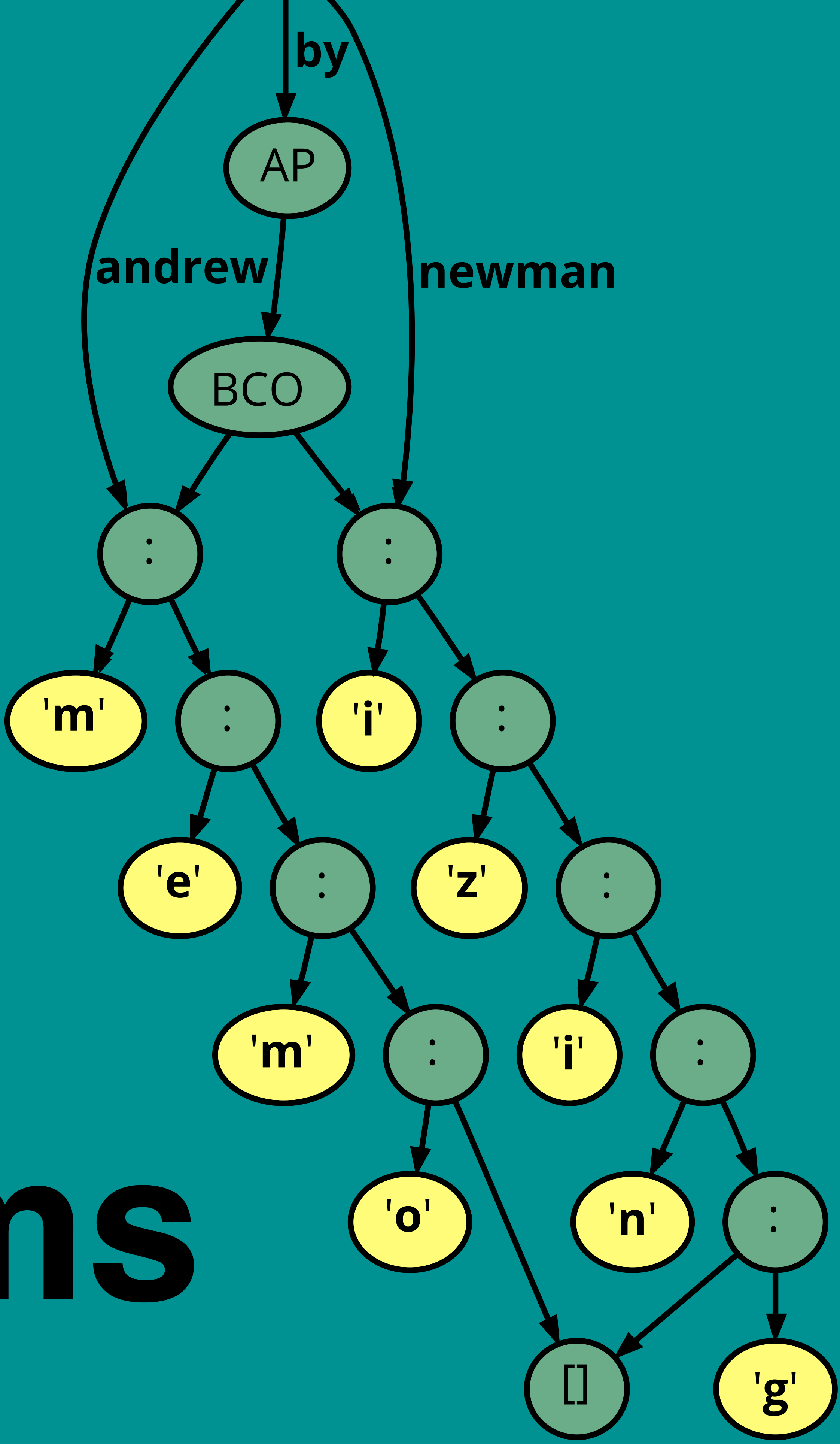
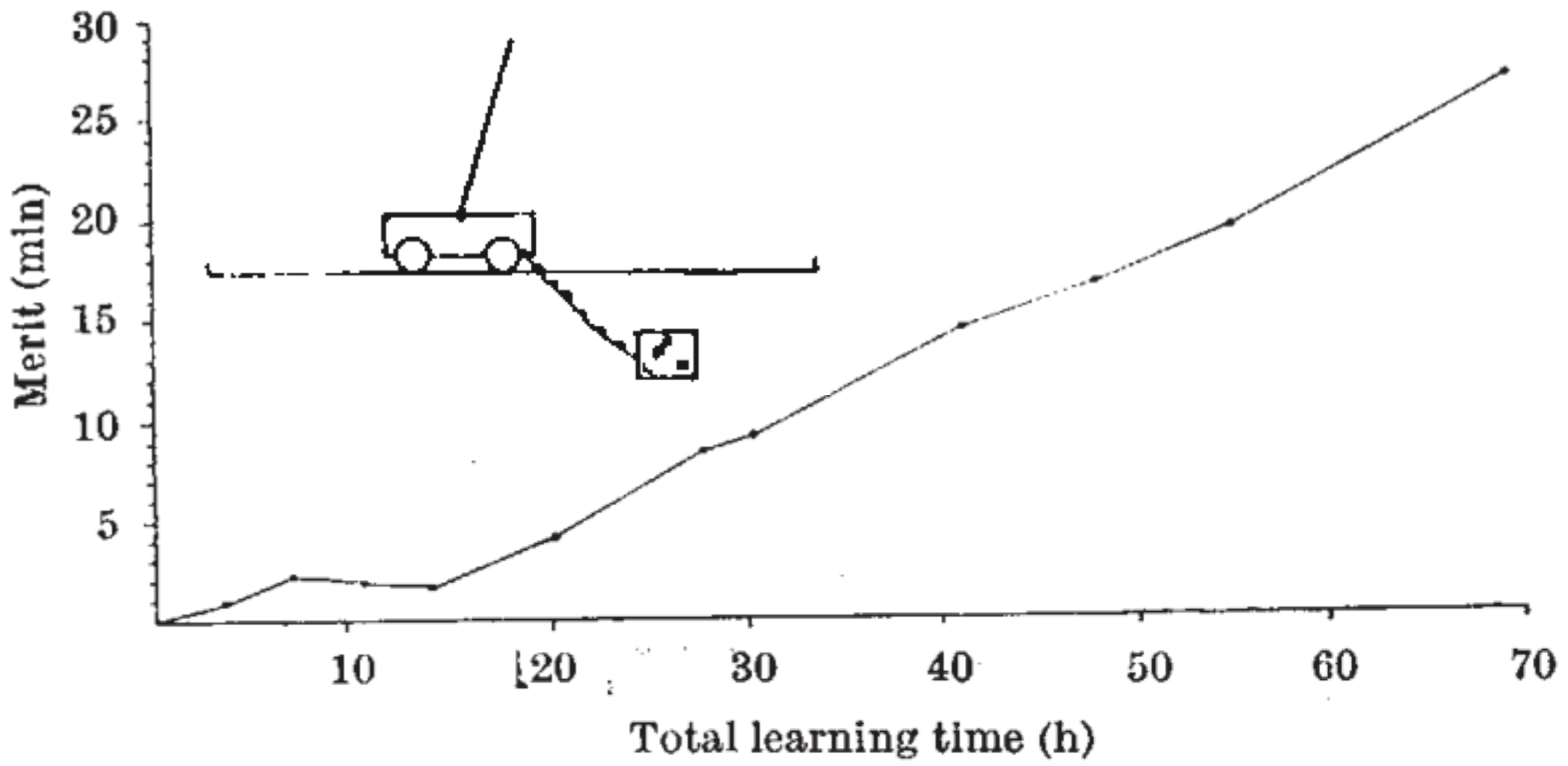


Algorithms

History



"It would be useful if computers could learn from experience and thus automatically improve the efficiency of their own programs during execution." Donald Michie, Nature, 1968.

Memo Functions

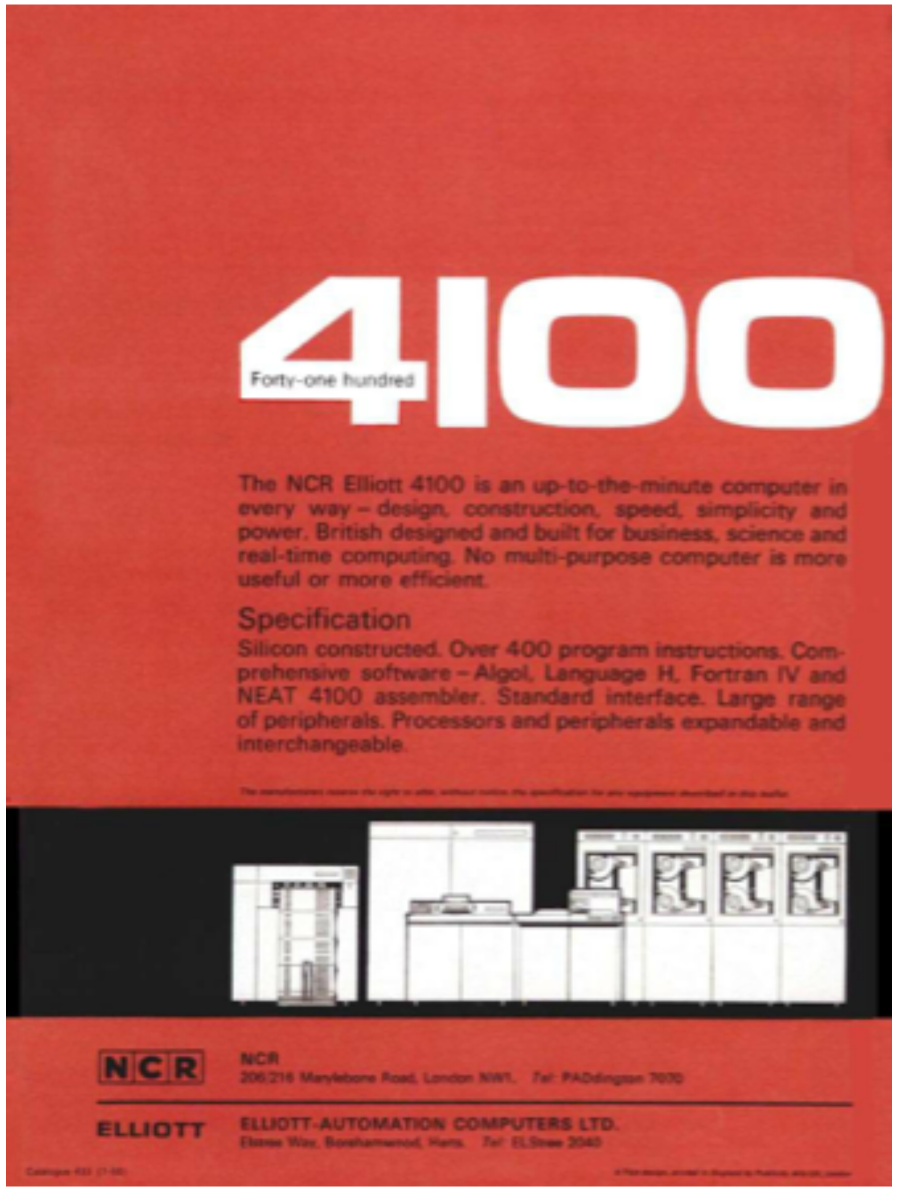
Factorial function, recursive “for clarity”:

```
if n < 0 or if not (n. isinteger) then undef
else
if n = 0 then 1 else n * fact (n - 1) close
end
```

Add “memo”:newmemo (fact, 100, nonop =) → fact;...rote has an upper fixed limit of 100 entries...the symbol nonop warns the machine not to try to operate the “=” function at this stage...

Elliot 4100

2-6 microseconds (MHz)
24 bits
4 x 65,536 words (96kB)
1,000 pounds (~450kg)
Algol, H, Fortran, Assembler



4100

Forty-one hundred

The NCR Elliott 4100 is an up-to-the-minute computer in every way – design, construction, speed, simplicity and power. British designed and built for business, science and real-time computing. No multi-purpose computer is more useful or more efficient.

Specification

Silicon constructed. Over 400 program instructions. Comprehensive software – Algol, Language H, Fortran IV and NEAT 4100 assembler. Standard interface. Large range of peripherals. Processors and peripherals expandable and interchangeable.

[illegible]

NCR
NCR
206/216 Marylebone Road, London NW1. *Tel:* PADdington 7070

ELLIOTT
ELLIOTT-AUTOMATION COMPUTERS LTD.
Elstree Way, Borehamwood, Herts. *Tel:* ELStree 2040

Catalogue [illegible]

[illegible]

Evaluation

Strict	Non-Strict
Applicative Order	Normal Order
Call by Value	Call by Name
Call by Reference	Call by Need

Call by Need or Lazy

GHC Objects

S# 5050

CONSTR

FUN_STATI
C

t0

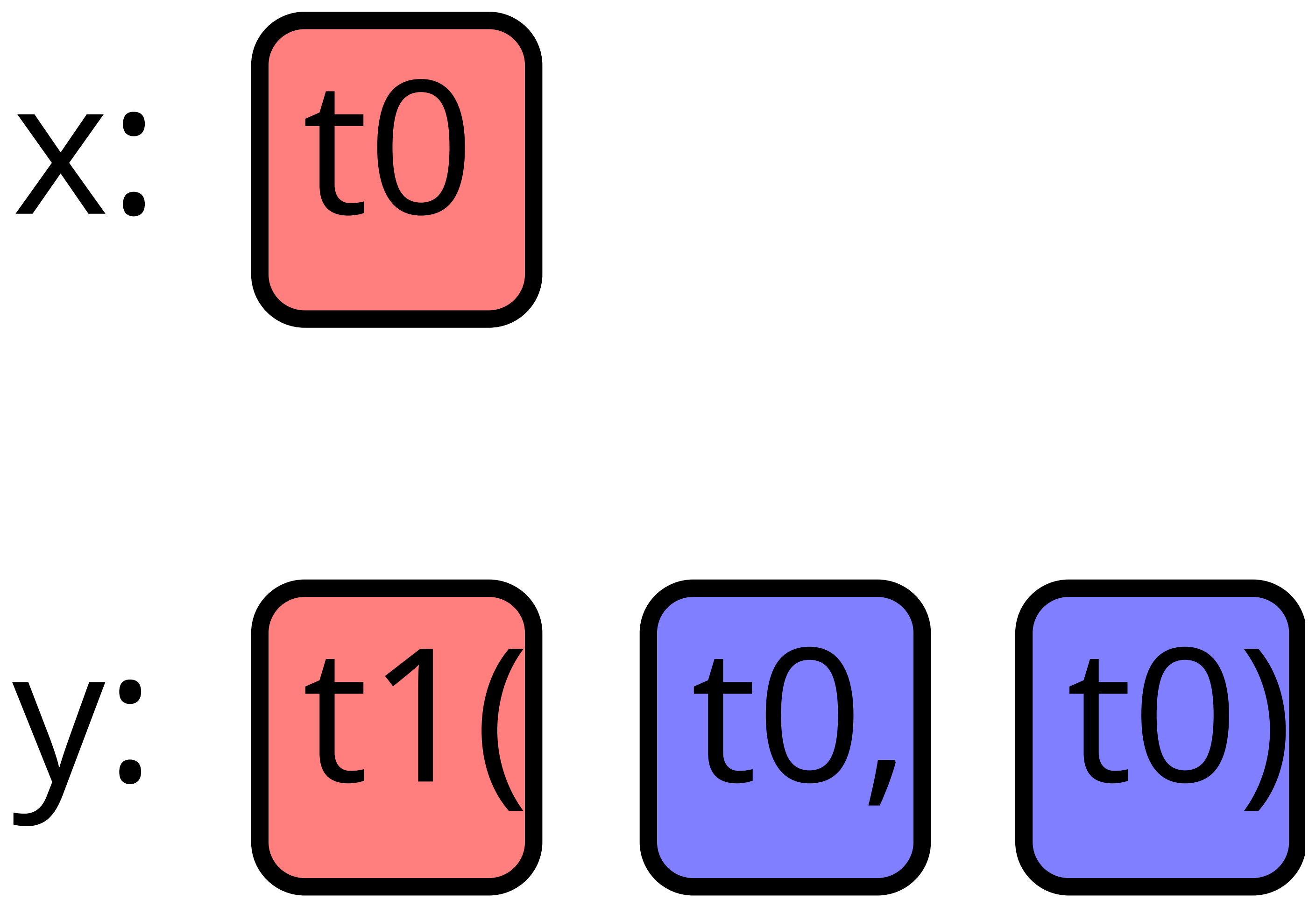
CLOSURE

Normal Forms

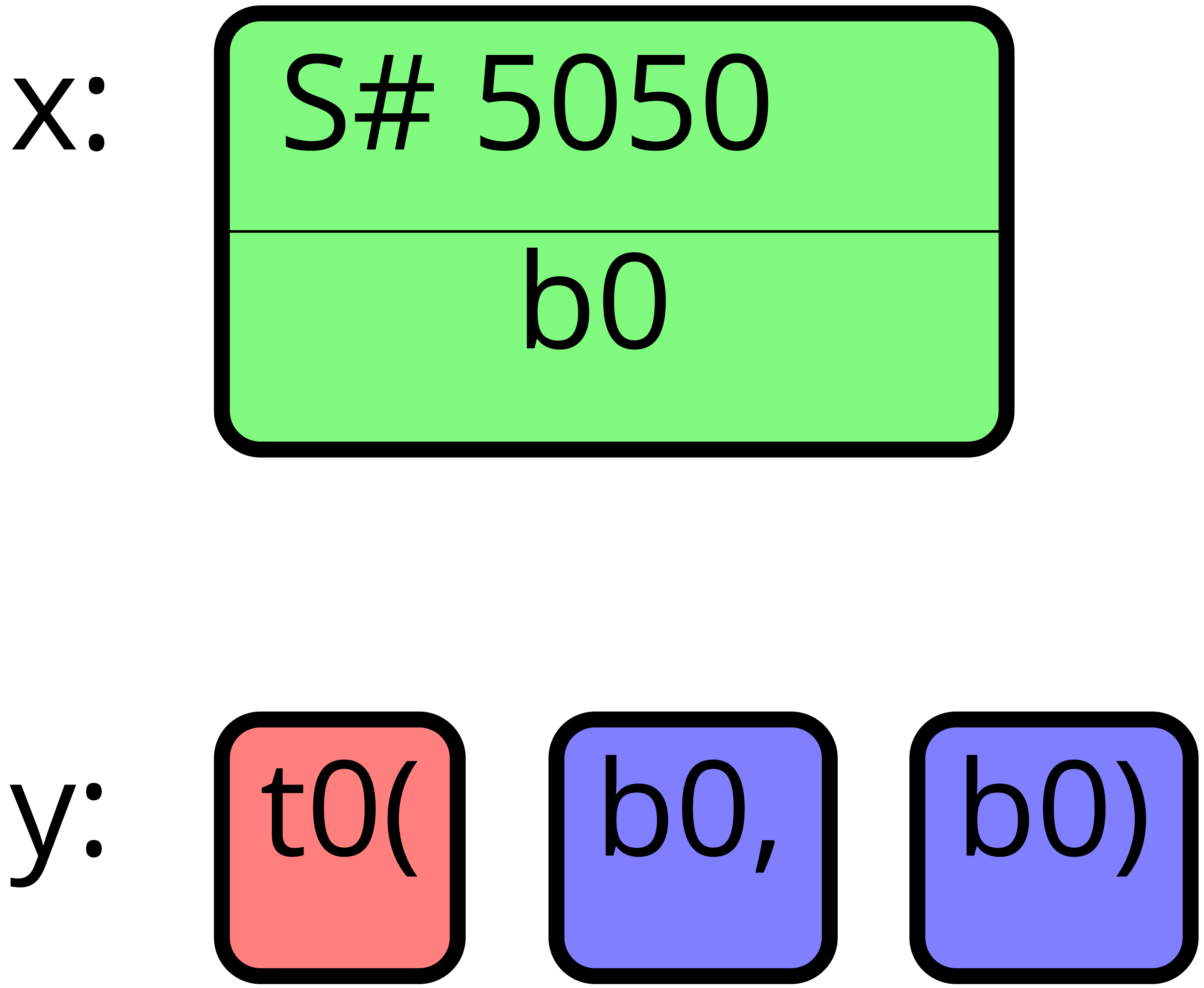
Example

```
> let x = sum [1..100]
> let y = x * x
> x
5050
> y
25502500
```

:view a, :view b



:eval t0



:eval t0

```
x: S# 5050

y: S# 25502500
```

IntMap

Letters and Numbers

Trie

Skeleton Tree

Space Leak

Nexus