Impcore variable definition

Example

(val n 99)

Compare

int n = 99;

Also, expressions at top level (definition of it)
Impcore expressions

No statements means expression-oriented:

(if e1 e2 e3)
(while e1 e2)
(set x e)
(begin e1 ... en)
(f e1 ... en)

Each one has a value and may have side effects!

Functions are primitive (+ - * / = < > print) or defined with (define f ...).

The only type of data is “machine integer” (deliberate oversimplification)
Names known in “environments”

Ways to talk about meanings of names:
- Scope rules
- Name spaces
- Environments (aka symbol tables)

Impcore vars in 2 environments: globals, formals

There are no local variables
- Just like awk; if you need temps, use extra formal parameters
- For homework, you’ll add local variables

Functions live in their own environment (not shared with variables)
Environmental abuse

Abuse of separate name spaces:

\[ \rightarrow (\text{val } f \ 33) \]
\[ 33 \]
\[ \rightarrow (\text{define } f \ (x) \ (+ \ x \ x)) \]
\[ f \]
\[ \rightarrow (f \ f) \]
\[ 66 \]