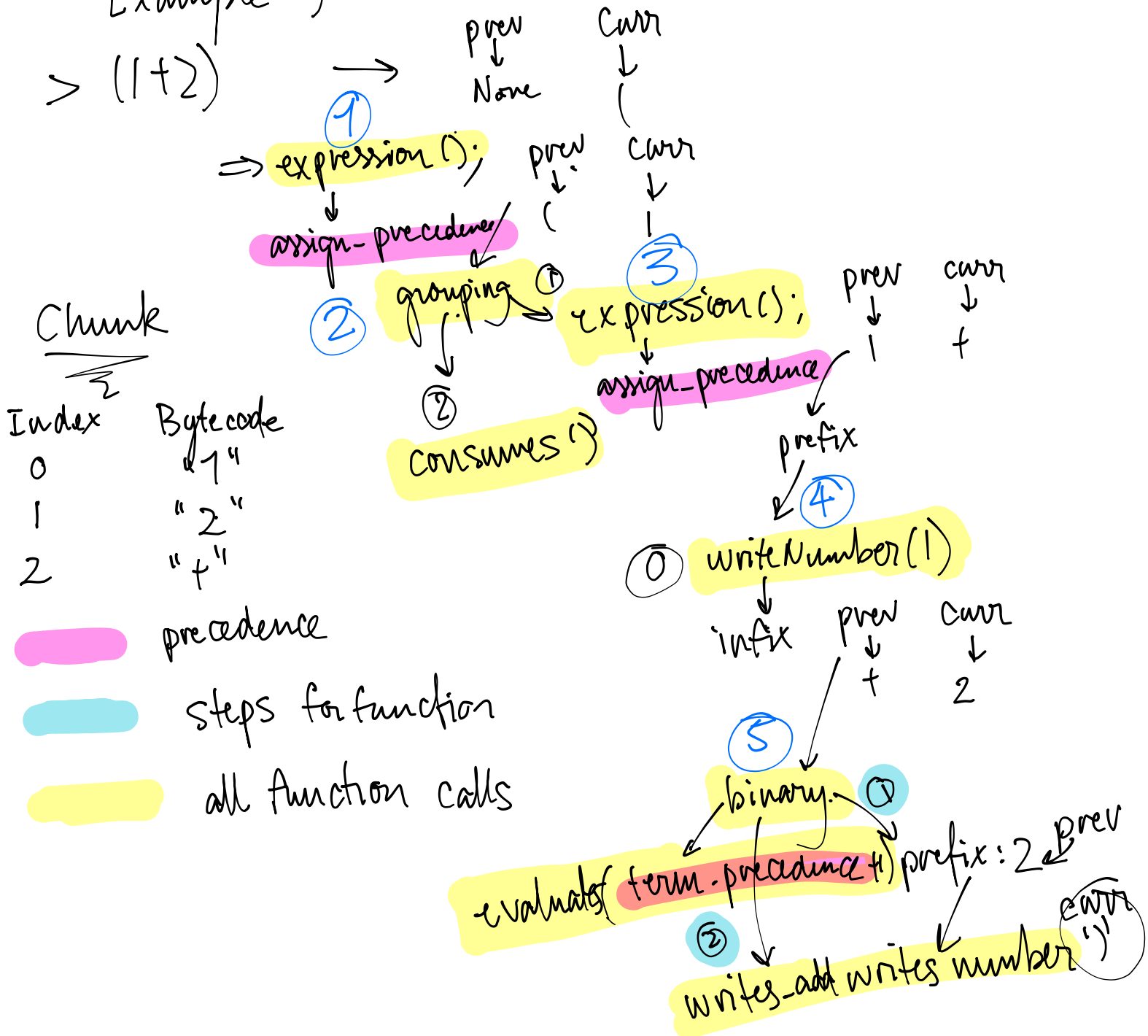# Pratt Parser Flow Charts

(,) $\longrightarrow$ grouping   numbers (1,2,etc.) $\Rightarrow$ number

$*, +, -, /$ $\longrightarrow$ binary

Example a)

> (1+2)

prev
↓
None

curr
↓
(

$\Rightarrow$ ① expression ();

prev
↓
(

curr
↓
(

assign-precedence

② grouping ①

prev
↓
:
(

③ expression ();

assign-precedence

prev
↓
1

curr
↓
+

① consumes)

② prefix

④ writeNumber(1)

⓪

infix

prev
↓
+

curr
↓
2

Chunk

Index	Bytecode
0	"1"
1	"2"
2	"+"

precedence

steps for function

all function calls

⑤ binary ①

evaluate(term-precedence +) prefix: 2 prev

② writes-add writes number

curr
)

Example 2: 3 * (1+2)

Expression();
 curr : 3
  prev : None

$\longrightarrow$

parse precedence (assign)
 curr: x $\longrightarrow$
  prev: 3

① prefix $\longrightarrow$ writenum(3)

② infix $\downarrow$

binary();
 curr: (
  prev: x

① $\longrightarrow$ parse precedence (factor+1)
 curr: 1
  prev: (

② $\downarrow$ write byte ("x")

prefix $\downarrow$

grouping();

$\downarrow$

expression();

$\downarrow$

① prefix $\longleftarrow$ writenum(1)

parse prec (assign)
 curr: +
  prev: 1

② infix $\downarrow$

Chunk:

Index	Byte code
0	3
1	1
2	2
3	+
4	x

⇒ Traverse using DFS

binary ()
 curr: 2
  prev: +

$\longrightarrow$ write byte (+)
②

① $\downarrow$

parse preced (term+1)
 curr:)
  prev: 2

① prefix $\swarrow$ writenumb(2)

② $\searrow$ infix
 curr:) None STOP

prev:2