❑ c: constant

e: expression
str: string
car: char array
v,w : vectors
mat: matrix
x, y: variables
H: heap for storage

$v^e, w^e,$ : vector of expressions
$v^c, w^c$ : vector of constants

Array access of an integer index

$$\frac{}{v(c) \rightarrow v_c}$$

Array access of an expression that evaluates to an integer

$$\frac{e \rightarrow c}{V(e) \rightarrow V_c}$$

Vector expression evaluation

$$\frac{v^e = [e_1, e_2, \ldots e_n]}{v^e \rightarrow [v_1^c, v_2^c, \ldots, v_n^c]}$$

Array acess of a range

$$\frac{RANGE \rightarrow (BEGIN, END)}{V(RANGE) \rightarrow [V_{begin}, V_{begin+1}, V_{begin+2}, \ldots V_{end}]}$$

scalar-vector multiplication

$$\frac{e \rightarrow c}{e * v \rightarrow [c * v_1, c * v_2, \ldots c * v_n]}$$

vector-vector addition

$$\frac{v^e \rightarrow v^c, w^e \rightarrow w^c}{v^e + w^e \rightarrow [v_1^c + w_1^c, v_2^c + w_2^c, \ldots, v_n^c + w_n^c]}$$