$$\mathcal{E}[\![\texttt{e + e'}]\!] = \textsc{Plus}(\mathcal{E}[\![\texttt{e}]\!], \mathcal{E}[\![\texttt{e'}]\!])$$

$$\mathcal{E}[\![\texttt{e - e'}]\!] = \textsc{Minus}(\mathcal{E}[\![\texttt{e}]\!], \mathcal{E}[\![\texttt{e'}]\!])$$

$$\mathcal{E}[\![\texttt{e * e'}]\!] = \textsc{Mult}(\mathcal{E}[\![\texttt{e}]\!], \mathcal{E}[\![\texttt{e'}]\!])$$

$$\mathcal{E}[\![\texttt{e > e'}]\!] = \textsc{GT}(\mathcal{E}[\![\texttt{e}]\!], \mathcal{E}[\![\texttt{e'}]\!])$$

$$\mathcal{E}[\![\texttt{e == e'}]\!] = \textsc{Eq}(\mathcal{E}[\![\texttt{e}]\!], \mathcal{E}[\![\texttt{e'}]\!])$$

$$\mathcal{E}[\![\texttt{e != e'}]\!] = \textsc{Neq}(\mathcal{E}[\![\texttt{e}]\!], \mathcal{E}[\![\texttt{e'}]\!])$$

$$\mathcal{E}[\![\texttt{e \& e'}]\!] = \textsc{BitAnd}(\mathcal{E}[\![\texttt{e}]\!], \mathcal{E}[\![\texttt{e'}]\!])$$

$$\mathcal{E}[\![\texttt{e | e'}]\!] = \textsc{BitOr}(\mathcal{E}[\![\texttt{e}]\!], \mathcal{E}[\![\texttt{e'}]\!])$$

$$\mathcal{E}[\![\texttt{\textasciitilde e}]\!] = \textsc{BitNot}(\mathcal{E}[\![\texttt{e}]\!])$$

$$\mathcal{E}[\![\texttt{x}]\!] = x \text{ (variable lookup)}$$

$$\mathcal{E}[\![\texttt{n}]\!] = n \text{ (integer constants)}$$

$$\mathcal{E}[\![\texttt{true}]\!] = \textsc{True}$$

$$\mathcal{E}[\![\texttt{false}]\!] = \textsc{False}$$

$$\mathcal{E}[\![\texttt{fn(e1,}\dots\texttt{)}]\!] = fn(\mathcal{E}[\![\texttt{e1}]\!], \dots)$$

$$\mathcal{E}[\![\texttt{vardec type x := e}]\!] = \text{vardec } type\ x \leftarrow \mathcal{E}[\![\texttt{e}]\!]$$

$$\mathcal{E}[\![\texttt{x := e}]\!] = x \leftarrow \mathcal{E}[\![\texttt{e}]\!]$$

$$\mathcal{E}[\![\texttt{x := e}]\!]c = x \leftarrow \textsc{BitOr}(\textsc{BitAnd}(\mathcal{E}[\![\texttt{e}]\!], c), \textsc{BitAnd}(x, \textsc{BitNot}(c)))$$

$$\mathcal{E}[\![\texttt{for i in n..m do b}]\!] = \text{for } i \text{ in } n..m \text{ do } \mathcal{E}[\![\texttt{b}]\!] \text{ (where } n \text{ and } m \text{ are integer constants)}$$

$$\mathcal{E}[\![\texttt{if e then b1 else b2}]\!] = c \leftarrow \mathcal{E}[\![\texttt{e}]\!]; \mathcal{E}[\![\texttt{b1}]\!]c; c \leftarrow \textsc{BitNot}(c); \mathcal{E}[\![\texttt{b2}]\!]c$$

$$\mathcal{E}[\![\texttt{if e then b1 else b2}]\!]c = c' \leftarrow \textsc{BitAnd}(\mathcal{E}[\![\texttt{e}]\!], c); \mathcal{E}[\![\texttt{b1}]\!]c'; c' \leftarrow \textsc{BitAnd}(\textsc{BitNot}(\mathcal{E}[\![\texttt{e}]\!]), c); \mathcal{E}[\![\texttt{b2}]\!]c'$$

$$\mathcal{E}[\![\texttt{return e}]\!] = rval \leftarrow \textsc{BitOr}(rval, \textsc{BitAnd}(\mathcal{E}[\![\texttt{e}]\!], \textsc{BitNot}(rset))); rset \leftarrow \textsc{True}$$

$$\mathcal{E}[\![\texttt{return e}]\!]c = rval \leftarrow \textsc{BitOr}(rval, \textsc{BitAnd}(\mathcal{E}[\![\texttt{e}]\!], \textsc{BitAnd}(c, \textsc{BitNot}(rset)))); rset \leftarrow \textsc{BitOr}(rse$$

$$\mathcal{E}[\![\texttt{fdec name(params) rtype stms}]\!] = fdec\ name(params)\ rtype\ \mathcal{E}[\![\texttt{stms}]\!]\ rval$$