

Given `guarded-exp`:

```

guarded-exp ::= exp
              |  ∃ x . guarded-exp
              |  x = exp; guarded-exp

```

`if e_1 [] e_2 [] ... e_n [] ... fi`,
 where each e_k is a `guarded-exp`, rewrites to:

$$(\mathbf{one} \{ \mathcal{T}[\![e_1]\!] \mid (\mathcal{T}[\![e_2]\!]) \mid \dots \mid (\mathcal{T}[\![e_n]\!]) \mid \mathbf{wrong} \}) \langle \rangle$$

where

$$\mathcal{T}[\![\mathbf{exp}]\!] = \lambda \langle \rangle. \mathbf{exp} \tag{1}$$

$$\mathcal{T}[\![\exists x. \mathbf{guarded-exp}]\!] = \exists x. \mathcal{T}[\![\mathbf{guarded-exp}]\!] \tag{2}$$

$$\mathcal{T}[\![x = \mathbf{exp}; \mathbf{guarded-exp}]\!] = x = \mathbf{exp}; \mathcal{T}[\![\mathbf{guarded-exp}]\!] \tag{3}$$

Let's build off of this to formalize our translations.