

6.18 forslag

Grammar Rule	Semantic Rule
$exp_1 \rightarrow exp_2 + exp_3$	$exp_1.val =$ $\text{if } (exp_2.val = \text{error}) \text{ or}$ $(exp_3.val = \text{error})$ then error $\text{else } exp_2.val + exp_3.val$
$exp_1 \rightarrow (exp_2)$	$exp_1.val = exp_2.val$
$exp \rightarrow id$	$exp.val = lookupVal(exp.syntab,$ $id.name)$
$exp \rightarrow num$	$exp.val = num.val$

```
 $exp_1 \rightarrow \text{let } dec-list \text{ in } exp_2$ 
```

```
 $exp_1.\text{val} =$ 
 $\quad \text{if } (dec-list.\text{outtab} = \text{errtab})$ 
 $\quad \text{then error}$ 
 $\quad \text{else } exp_2.\text{val}$ 
```

```
 $decl \rightarrow id = exp$ 
```

```
 $decl.\text{outtab} =$ 
 $\quad \text{if } (decl.\text{intab} = \text{errtab})$ 
 $\quad \text{then errtab}$ 
 $\quad \text{else}$ 
 $\quad \quad \text{if}$ 
 $\quad \quad \quad (lookupLevel($ 
 $\quad \quad \quad \quad decl.\text{intab}, id.\text{name}) =$ 
 $\quad \quad \quad \quad decl.\text{nestlevel})$ 
 $\quad \quad \quad \text{then errtab}$ 
 $\quad \quad \quad \text{else}$ 
 $\quad \quad \quad \quad insert(decl.\text{intab}, id.\text{name},$ 
 $\quad \quad \quad \quad decl.\text{nestlevel}, exp.\text{val})$ 
```
