

## Dostop

$$\begin{array}{c}
\frac{\text{S-N}}{L \vdash \underline{n}} \quad \frac{\text{S-B}}{b \in \{\mathbb{f}, \mathbb{t}\}} \quad \frac{\text{S-L}}{l \in L} \quad \frac{\text{S-OP}}{L \vdash e_1 \quad L \vdash e_2 \quad \oplus \in \{+, -, \times\}} \\
\frac{}{L \vdash \underline{n}} \quad \frac{}{L \vdash b} \quad \frac{}{L \vdash !l} \quad \frac{}{L \vdash e_1 \oplus e_2} \\
\\
\frac{\text{S-SKIP}}{L \vdash \mathbf{SKIP}, L} \quad \frac{\text{S-A}}{L \vdash l := e, L \cup \{l\}} \quad \frac{\text{S-SEQ}}{L \vdash c_1, L' \quad L' \vdash c_2, L''} \\
\\
\frac{\text{S-COND}}{L \vdash b \quad L \vdash c_1, L' \quad L \vdash c_2, L''} \\
L \vdash \mathbf{IF } b \mathbf{ THEN } c_1 \mathbf{ ELSE } c_2 \mathbf{ END}, L' \cap L'' \\
\\
\frac{\text{S-WHILE}}{L \vdash b \quad L \vdash c, L'} \\
L \vdash \mathbf{WHILE } b \mathbf{ DO } c \mathbf{ DONE}, L
\end{array}$$

## Mali koraki

$$\begin{array}{c}
\frac{\text{E-A}}{s, e \Downarrow n} \quad \frac{\text{E-SEQ1}}{s, c_1 \rightsquigarrow s', c'_1} \\
s, l := e \rightsquigarrow s[l \mapsto n], \mathbf{SKIP} \quad s, c_1; c_2 \rightsquigarrow s', c'_1; c_2 \\
\\
\frac{\text{E-SEQ2}}{s, \mathbf{SKIP}; c_2 \rightsquigarrow s, c_2} \quad \frac{\text{E-COND-T}}{s, b \Downarrow \mathbb{t}} \\
s, \mathbf{IF } b \mathbf{ THEN } c_1 \mathbf{ ELSE } c_2 \mathbf{ END} \rightsquigarrow s, c_1 \\
\\
\frac{\text{E-COND-F}}{s, b \Downarrow \mathbb{f}} \\
s, \mathbf{IF } b \mathbf{ THEN } c_1 \mathbf{ ELSE } c_2 \mathbf{ END} \rightsquigarrow s, c_2 \\
\\
\frac{\text{E-WHILE-T}}{s, b \Downarrow \mathbb{t}} \\
s, \mathbf{WHILE } b \mathbf{ DO } c \mathbf{ DONE} \rightsquigarrow s, c; \mathbf{WHILE } b \mathbf{ DO } c \mathbf{ DONE} \\
\\
\frac{\text{E-WHILE-F}}{s, b \Downarrow \mathbb{f}} \\
s, \mathbf{WHILE } b \mathbf{ DO } c \mathbf{ DONE} \rightsquigarrow s, \mathbf{SKIP}
\end{array}$$