

$$\Sigma \vdash_p \text{false} \Sigma'$$

$$\text{while } e \text{ do } st_p \Sigma \Rightarrow \Sigma'$$

WHILE-FALSE

$$\Sigma \vdash_p e \text{ true}; \Sigma' \quad st_p \Sigma' \Rightarrow \Sigma'' \quad \text{while } e \text{ do } st_p \Sigma'' \Rightarrow \Sigma'''$$

$$\text{while } e \text{ do } st_p \Sigma \Rightarrow \Sigma'''$$

WHILE-TRUE
NO-RET

$$\Sigma \vdash_p e \text{ true}; \Sigma' \quad st_p \Sigma' \Rightarrow \boxed{\checkmark}$$

$$\text{while } e \text{ do } st_p \Sigma \Rightarrow \boxed{\checkmark}$$

WHILE-TRUE-RET