Exercise 4F-2.
VC(let $x = e$ in c, B) = $[x/x'][e/x]$VC$(c, [x'/x][0/x']B)$ where x' is some variable not used anywhere in c or e.

Exercise 4F-3.

1. Command:
   let x = 1 in skip
2. Post Condition:
   x = 1
3. State:
   σ := {x := 0}
4. VC(let x = 1 in skip, x = 1) $\iff$
   $[1\backslash x]$VC(skip, x = 1) $\iff$
   $[1\backslash x]$(x = 1) $\iff$
   (1 = 1) $\iff$
   true
   x := 0 $\models$ true
5. $\langle$let x = 1 in skip, {x := 0} $\rangle \Downarrow$ {x := 0}
6. {x := 0} $\not\models$ x = 1

Exercise 3F-4.

$$\frac{\{A\}c\{A\}}{\{A\}\textbf{do } c \textbf{ while } b\{A \wedge \neg B\}}$$