$$\frac{《S_1[z+1/z]》\ z=z+1;《S_1》}{《S_0 \wedge z \neq x》\ z=z+1《S_1》} \qquad 《S_1》y[z]=y[z-1]*z\ 《S_0》$$

$$\frac{《S_0 \wedge z \neq x》\ z=z+1;y[z]=y[z-1]*z\ 《S_0》}{《S_0》\ \text{while}\ z \neq x\ \{\ z=z+1;y[z]=y[z-1]*z\ \}《S_0\ \wedge z=x》}$$

$$《\forall i(0 \leq i \leq x \supset y[i]=1) \wedge z=0》\ \text{while}\ z \neq x\ \{\ z=z+1;y[z]=y[z-1]*z\ \}\ 《\forall i(0 \leq i \leq x \supset y[i]=i!)》$$

S_0: $\forall i(0 \leq i \leq z \supset y[i]=i!) \wedge \forall i(z<i \leq x \supset y[i]=1)$

S_1: $\forall i(0 \leq i \leq z \supset y(y[z-1] \cdot z\ ;\ z)[i]=i!) \wedge \forall i(z<i \leq x \supset y(y[z-1] \cdot z\ ;\ z)[i]=1)$

$S_1[z+1/z]$:

$\forall i(0 \leq i \leq z+1 \supset y(y[z] \cdot (z+1)\ ;\ z+1)[i]=i!) \wedge \forall i(z+1<i \leq x \supset y(y[z] \cdot (z+1)\ ;\ z+1)[i]=1)$

検証条件

$\forall i(0<i \leq z \supset y[i]=i!) \wedge \forall i(z<i \leq x \supset y[i]=1) \wedge y[0]=1 \wedge z \neq x \supset S_1[z+1/z]$

$\forall i(0 \leq i \leq x \supset y[i]=1) \wedge z=0 \supset S_0$

$S_0 \wedge z=x \supset \forall i(0 \leq i \leq x \supset y[i]=i!)$