$$vc(\{n \geq 0\}\ x := 1\ \{x = 1 \wedge n \geq 0\}) = \{n \geq 0 \Rightarrow [1/x](x = 1 \wedge n \geq 0)\}$$
$$= \{n \geq 0 \Rightarrow (1 = 1 \wedge 1 \geq 0)\} \quad OP1$$

$$vc(\{x = 1 \wedge n \geq 0\}\ y := n\ \{x \times y! = n! \wedge y \geq 0\})$$
$$= \{(x = 1 \wedge n \geq 0) \Rightarrow [n/y](x \times y! = n! \wedge y \geq 0)\}$$
$$= \{(x = 1 \wedge n \geq 0) \Rightarrow (\underbrace{x \times n! = n!}_{x = 1} \wedge n \geq 0)\} \quad \text{c.q.f.d.}$$

$vc(\{x \times y! = n! \wedge y \geq 0\}$ while $y \neq 0$ inv $x \times y! = n! \wedge y \geq 0$ var y do P $\{x = n!\})$

$$= \{(x \times y! = n! \wedge y \geq 0 \wedge \neg(y \neq 0)) \Rightarrow \{x = n!\},\ OP3$$
$$(x \times y! = n! \wedge y \geq 0) \Rightarrow (x \times y! = n! \wedge y \geq 0)\} \quad \text{c.q.f.d.}$$
$$\cup\ vc(\{x \times y! = n! \wedge y \geq 0 \wedge y \neq 0\}\ P\ \{x \times y! = n! \wedge y \geq 0\})$$

$$vc(\{x \times y! = n! \wedge y \geq 0 \wedge y \neq 0\}\ x := x \times y\ \{x \times (y-1)! = n! \wedge (y-1) \geq 0\})$$
$$= (x \times y! = n! \wedge y \geq 0 \wedge y \neq 0) \Rightarrow [x \times y/x](x \times (y-1)! = n! \wedge (y-1) \geq 0)$$
$$= (x \times y! = n! \wedge y \geq 0 \wedge y \neq 0) \Rightarrow (x \times y \times (y-1)! = n! \wedge (y-1) \geq 0) \quad OP2$$

$$vc(\{x \times (y-1)! = n! \wedge (y-1) \geq 0\}\ y := y-1\ \{x \times y! = n! \wedge y \geq 0\})$$
$$= (x \times (y-1)! = n! \wedge (y-1) \geq 0) \Rightarrow [y-1/y](x \times y! = n! \wedge y \geq 0)$$
$$= (x \times (y-1)! = n! \wedge (y-1) \geq 0) \Rightarrow (x \times (y-1)! = n! \wedge (y-1) \geq 0) \quad \text{c.q.f.d.}$$