

t5\_finseqop  
(TMTywFyjKxH9fYVNiCv2tbpgMEwh6kV8wbf)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k5\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k3\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.(( \\ v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow ((k3\_funcop\_1 X0 k1\_xboole\_0 \\ X1 = k1\_xboole\_0) \wedge (k3\_funcop\_1 X0 X1 k1\_xboole\_0 = k1\_xboole\_0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.(( \\ v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2.k5\_funcop\_1 X1 X2 \\ X0 = k3\_funcop\_1 X1 (k2\_funcop\_1 (k9\_xtuple\_0 X0) X2) X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.v1\_relat\_1 (k2\_zfmisc\_1 X0 X1) \quad (3)$$

Assume the following.

$$v1\_xboole\_0 k1\_xboole\_0 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1 (k2\_funcop\_1 X0 X1)) \wedge (v1\_funct\_1 \\ (k2\_funcop\_1 X0 X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k2\_funcop\_1 X0 X1 = k2\_zfmisc\_1 X0 (k1\_tarski \\ X1) \quad (6)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (v1\_relat\_1 X0) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (v1\_funct\_1 X0) \quad (8)$$

**Theorem 1**

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (k5\_funcop\_1 X1 X0 k1\_xboole\_0 = k1\_xboole\_0)$$