

t3\_finseqop  
(TMTLNT6mpaJyDqoWRqjYPWug5yKB7EP81ai)

October 27, 2020

Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k3\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k13\_funct\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow ((k3\_relat\_1 k1\_xboole\_0 X0 = k1\_xboole\_0) \wedge (k3\_relat\_1 X0 k1\_xboole\_0 = k1\_xboole\_0)) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 k1\_xboole\_0) \wedge ((v5\_relat\_1 k1\_xboole\_0 X0) \wedge ((v1\_funct\_1 k1\_xboole\_0) \wedge (v5\_ordinal1 k1\_xboole\_0))) \quad (2)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((k13\_funct\_3 k1\_xboole\_0 X0 = k1\_xboole\_0) \wedge (k13\_funct\_3 X0 k1\_xboole\_0 = k1\_xboole\_0)) \quad (3)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2.((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow (k3\_funcop\_1 X0 X1 X2 = k3\_relat\_1 (k13\_funct\_3 X1 X2) X0))) \quad (4)$$

**Theorem 1**

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow ((k3\_funcop\_1 X0 k1\_xboole\_0 X1 = k1\_xboole\_0) \wedge (k3\_funcop\_1 X0 X1 k1\_xboole\_0 = k1\_xboole\_0)))$$