

## t125\_funct\_7

(TMdgCjxUqSK1bZiLHrjWuNk5qL4DJ67YVRh)

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Let  $k13\_funct\_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_funct\_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_funct\_7 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k7\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k16\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$m1\_subset\_1 k1\_xboole\_0 k4\_ordinal1 \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow (k1\_funct\_4 (k1\_funct\_4 X0 X1) X2 = k1\_funct\_4 X0 (k1\_funct\_4 X1 X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (k9\_xtuple\_0 (k2\_funcop\_1 X0 X1) = X0) \wedge (r1\_tarski (k10\_xtuple\_0 (k2\_funcop\_1 X0 X1)) (k1\_tarski X1)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. k9\_xtuple\_0 (k11\_funct\_7 X0 X1) = k5\_numbers \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k7\_funcop\_1 X0 X1 = k2\_funcop\_1 X0 X1 \quad (6)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (7)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (8)$$

Assume the following.

$$np\_1 \in k5\_numbers \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.v1\_relat\_1 (k2\_zfmisc\_1 X0 X1) \quad (10)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1) \wedge (v3\_ordinal1 k4\_ordinal1) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(v1\_funct\_1 (k7\_funcop\_1 X0 X1)) \wedge ((v1\_funct\_2 \\ & (k7\_funcop\_1 X0 X1) X0 (k1\_tarski X1)) \wedge (m1\_subset\_1 (k7\_funcop\_1 \\ & X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 (k1\_tarski X1)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \wedge (( \\ & v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1))) \Rightarrow ((v1\_relat\_1 (k1\_funct\_4 X0 \\ & X1)) \wedge (v1\_funct\_1 (k1\_funct\_4 X0 X1))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.k16\_funcop\_1 X0 X1 = k7\_funcop\_1 (k1\_tarski X0) X1 \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.k4\_funct\_4 X0 X1 X2 \\ & X3 = k1\_funct\_4 (k16\_funcop\_1 X0 X2) (k16\_funcop\_1 X1 X3) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.\forall X2. \\ & ((X1 \in k9\_xtuple\_0 X0) \Rightarrow (k2\_funct\_7 X0 X1 X2 = k1\_funct\_4 X0 (k16\_funcop\_1 \\ & X1 X2))) \wedge ((\neg X1 \in k9\_xtuple\_0 X0) \Rightarrow (k2\_funct\_7 X0 X1 X2 = X0))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.k2\_funcop\_1 X0 X1 = k2\_zfmisc\_1 X0 (k1\_tarSKI X1) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k13\_funct\_7 X0 X1 X2 = k1\_funct\_4 (k7\_funcop\_1 k5\_numbers X2) (k4\_funct\_4 k6\_numbers np\_1 X0 X1) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.k11\_funct\_7 X0 X1 = k2\_funct\_7 (k7\_funcop\_1 k5\_numbers X1) k6\_numbers X0 \quad (19)$$

**Theorem 1**

$$\forall X0.\forall X1.\forall X2.k13\_funct\_7 X0 X1 X2 = k2\_funct\_7 (k11\_funct\_7 X0 X2) np\_1 X1$$