

# l1\_matrixj2

(TMWevD8bc6h7XpeLtC6nJiJUhtCyeQ813Mt)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_funct\_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k16\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (X0 \neq k1\_xboole\_0) \Rightarrow (k10\_xtuple\_0 (k2\_funcop\_1 X0 X1) = k1\_tarski X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow ((v2\_funct\_1 X2) \Rightarrow (k7\_relat\_1 X2 (k6\_subset\_1 X0 X1) = k6\_subset\_1 (k7\_relat\_1 X2 X0) (k7\_relat\_1 X2 X1))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow ((X0 \in k9\_xtuple\_0 X1) \Rightarrow (k9\_relat\_1 X1 X0 = k1\_tarski (k1\_funct\_1 X1 X0))) \quad (3)$$

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.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (k10\_xtuple\_0 (k1\_funct\_4 X0 X1) = k2\_xboole\_0 (k7\_relat\_1 X0 (k6\_subset\_1 (k9\_xtuple\_0 X0) (k9\_xtuple\_0 X1))) (k10\_xtuple\_0 X1))) \quad (5)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (k7\_relat\_1 X0 (k9\_xtuple\_0 X0) = k10\_xtuple\_0 X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.k7\_funcop\_1 X0 X1 = k2\_funcop\_1 X0 X1 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.v1\_relat\_1 (k2\_zfmisc\_1 X0 X1) \quad (8)$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0 (k1\_tarski X0) \quad (9)$$

Assume the following.

$$v1\_xboole\_0 k1\_xboole\_0 \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_funct\_1 (k7\_funcop\_1 X0 X1)) \wedge ((v1\_funct\_2 (k7\_funcop\_1 X0 X1) X0 (k1\_tarski X1)) \wedge (m1\_subset\_1 (k7\_funcop\_1 X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 (k1\_tarski X1)))))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.k16\_funcop\_1 X0 X1 = k7\_funcop\_1 (k1\_tarski X0) X1 \quad (12)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.\forall X2. ((X1 \in k9\_xtuple\_0 X0) \Rightarrow (k2\_funct\_7 X0 X1 X2 = k1\_funct\_4 X0 (k16\_funcop\_1 X1 X2))) \wedge ((\neg X1 \in k9\_xtuple\_0 X0) \Rightarrow (k2\_funct\_7 X0 X1 X2 = X0))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.k2\_funcop\_1 X0 X1 = k2\_zfmisc\_1 X0 (k1\_tarski X1) \quad (14)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.k9\_relat\_1 X0 X1 = k7\_relat\_1 X0 (k1\_tarski X1)) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.k2\_xboole\_0 X0 X1 = k2\_xboole\_0 X1 X0 \quad (16)$$

**Theorem 1**

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow (((v2\_funct\_1 X2) \wedge (X0 \in k9\_xtuple\_0 X2)) \Rightarrow (k10\_xtuple\_0 (k2\_funct\_7 X2 X0 X1) = k2\_xboole\_0 (k6\_subset\_1 (k10\_xtuple\_0 X2) (k1\_tarski (k1\_funct\_1 X2 X0)))) (k1\_tarski X1)))$$