

t8_armstrng (TMSX- CfC5dAp8XdTdbhEmRYL1PKiFyajNZhv)

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Let $k4_armstrng : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k8_mcart_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (k4_tarski X0 X1 \in k2_zfmisc_1 X2 X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 X0 \quad (5)$$

Assume the following.

$$\forall X0. k9_setfam_1 X0 = k1_zfmisc_1 X0 \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 X2 (k1_zfmisc_1 X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 X1))) \Rightarrow (k8_mcart_1 X0 X1 X2 X3 = k2_zfmisc_1 X2 X3) \quad (7)$$

Assume the following.

$$\forall X0. \neg v1_xboole_0 (k1_zfmisc_1 X0) \quad (8)$$

Assume the following.

$$\forall X0. k4_armstrng X0 = k8_mcart_1 (k1_zfmisc_1 X0) (k1_zfmisc_1 X0) (k9_setfam_1 X0) (k9_setfam_1 X0) \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (10)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Leftrightarrow (\forall X1. \neg (X1 \in X0) \wedge (\forall X2. \forall X3. X1 \neq k4_tarski X2 X3)) \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. k2_tarski X0 X1 = k2_tarski X1 X0 \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 X0 X1)) \Rightarrow (v1_relat_1 X2) \quad (13)$$

Theorem 1

$$\forall X0. \forall X1. (X1 \in k4_armstrng X0) \Leftrightarrow (\exists X2. (m1_subset_1 X2 (k1_zfmisc_1 X0)) \wedge (\exists X3. (m1_subset_1 X3 (k1_zfmisc_1 X0)) \wedge (X1 = k4_tarski X2 X3)))$$