

l34_waybel_5

(TMU8hTBqv5K4UDCjbLk2Z6y6h4EkdkLTWZ)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_finsub_1 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_finsub_1 : \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. v4_finsub_1 (k5_finsub_1 X0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (v4_finsub_1 X1) \Rightarrow ((X1 = k5_finsub_1 X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow ((r1_tarski X2 X0) \wedge (v1_finset_1 X2)))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (4)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. (X1 = k10_xtuple_0 X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (\exists X3. (X3 \in k9_xtuple_0 X0) \wedge (X2 = k1_funct_1 X0 X3)))) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k1_funct_2 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow (\exists X4. ((v1_relat_1 X4) \wedge (v1_funct_1 X4)) \wedge ((X3 = X4) \wedge ((k9_xtuple_0 X4 = X0) \wedge (r1_tarski (k10_xtuple_0 X4) X1)))))) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \Rightarrow ((m1_subset_1 X1 X0) \Leftrightarrow \\ & (X1 \in X0))) \wedge ((v1_xboole_0 X0) \Rightarrow ((m1_subset_1 X1 X0) \Leftrightarrow (v1_xboole_0 \\ & X1))) \end{aligned} \tag{7}$$

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((X2 \in k1_funct_2 \\ & X0 (k5_finsub_1 X1)) \Rightarrow (\forall X3. (m1_subset_1 X3 X0) \Rightarrow ((v1_finset_1 \\ & (k1_funct_1 X2 X3)) \wedge (m1_subset_1 (k1_funct_1 X2 X3) (k1_zfmisc_1 \\ & X1)))))))) \end{aligned}$$