

t47_setwiseo (TMaQWU-
uiR5bE4nmr8mTgiZcfK8MUHCTWxLp)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_finsub_1 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_setwiseo : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_setwiseo : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_setwiseo : \iota \Rightarrow \iota$ be given. Let $v1_setwiseo : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_binop_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_binop_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_setwiseo : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_finsub_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. k4_binop_1 (k5_finsub_1 X0) (k9_setwiseo X0) = k1_xboole_0 \quad (1)$$

Assume the following.

$$\forall X0. v1_setwiseo (k9_setwiseo X0) (k5_finsub_1 X0) \quad (2)$$

Assume the following.

$$\forall X0. v2_binop_1 (k9_setwiseo X0) (k5_finsub_1 X0) \quad (3)$$

Assume the following.

$$\forall X0. v1_binop_1 (k9_setwiseo X0) (k5_finsub_1 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (k2_zfmisc_1 X0 \\ & X0) X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0) X0)))) \Rightarrow (((v1_binop_1 X2 X0) \wedge ((v2_binop_1 X2 X0) \wedge (v1_setwiseo \\ & X2 X0))) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X1 X0) \wedge \\ & (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X1 X0)))) \Rightarrow (k7_setwiseo \\ & X1 X0 X2 (k1_setwiseo X1) X3 = k4_binop_1 X0 X2)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. (\neg v1_xboole_0 (k5_finsub_1 X0)) \wedge (v4_finsub_1 (k5_finsub_1 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0. (&v1_funct_1 (k9_setwiseo X0)) \wedge ((v1_funct_2 (k9_setwiseo \\ X0) (k2_zfmisc_1 (k5_finsub_1 X0) (k5_finsub_1 X0)) (k5_finsub_1 \\ X0)) \wedge (m1_subset_1 (k9_setwiseo X0) (k1_zfmisc_1 (k2_zfmisc_1 \\ (k2_zfmisc_1 (k5_finsub_1 X0) (k5_finsub_1 X0)) (k5_finsub_1 \\ X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. (v1_xboole_0 (k1_setwiseo X0)) \wedge (m1_subset_1 (k1_setwiseo X0) (k5_finsub_1 X0)) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. (&\neg v1_xboole_0 X0) \Rightarrow (\forall X1. \forall X2. (m1_subset_1 \\ X2 (k5_finsub_1 X0)) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 \\ X3 X0 (k5_finsub_1 X1)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 (k5_finsub_1 X1)))))) \Rightarrow (k10_setwiseo X0 X1 X2 X3 = k7_setwiseo \\ X0 (k5_finsub_1 X1) (k9_setwiseo X1) X2 X3))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. k1_setwiseo X0 = k1_xboole_0 \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0. (&\neg v1_xboole_0 X0) \Rightarrow (\forall X1. \forall X2. ((v1_funct_1 \\ X2) \wedge ((v1_funct_2 X2 X0 (k5_finsub_1 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 (k5_finsub_1 X1)))))) \Rightarrow (k10_setwiseo X0 X1 (k1_setwiseo \\ X0) X2 = k1_xboole_0)) \end{aligned}$$