

t12_rpr_1 (TMGnsHoTbGkJorGtF- Fwd3xpJZ4EyVPNCKku)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_zfmisc_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v3_card_1 X1 np_1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0))) \Rightarrow (\forall X2.(m1_subset_1 \\ X2 (k1_zfmisc_1 X0) \Rightarrow ((r1_xboole_0 X1 X2) \vee (k9_subset_1 X0 X1 X2 = \\ X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (\neg v1_xboole_0 X1)) \Rightarrow \\ ((r1_subset_1 X0 X1) \Rightarrow (r1_subset_1 X1 X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (\neg v1_xboole_0 X1)) \Rightarrow \\ ((r1_subset_1 X0 X1) \Leftrightarrow (r1_xboole_0 X0 X1)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \tag{5}$$

Assume the following.

$$\forall X0. (v3_card_1 X0 np_1) \Rightarrow ((\neg v1_xboole_0 X0) \wedge (v1_zfmisc_1 X0)) \tag{6}$$

Theorem 1

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v3_card_1 X1 np_1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0))) \Rightarrow (\forall X2. ((v3_card_1 X2 \\ np_1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow ((X1 = X2) \vee (r1_subset_1 \\ X1 X2)))))) \end{aligned}$$