

t47_rpr_1

(TMM6psLeUV6Jd3GzjVXWTomronk9LqspCc3)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_rpr_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $k2_rpr_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_xboole_0 X0 X2)) \Rightarrow (r1_tarski X0 (k4_xboole_0 X1 X2)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge (v1_finset_1 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 \\ & (k1_zfmisc_1 X0)) \Rightarrow ((r1_tarski X2 X1) \Rightarrow ((r1_xxreal_0 (k1_rpr_1 \\ & X0 X2) k6_numbers) \vee (k2_rpr_1 X0 X2 X1 = np_1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge (v1_finset_1 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 \\ & (k1_zfmisc_1 X0)) \Rightarrow ((\neg r1_xxreal_0 (k1_rpr_1 X0 X2) k6_numbers) \Rightarrow \\ & ((k2_rpr_1 X0 X2 X1 = k9_real_1 np_1 (k2_rpr_1 X0 X2 (k3_subset_1 \\ & X0 X1))) \wedge (k2_rpr_1 X0 X2 (k3_subset_1 X0 X1) = k9_real_1 np_1 (k2_rpr_1 \\ & X0 X2 X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_finset_1 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ (k1_zfmisc_1 X0)) \Rightarrow ((r1_tarski X1 X2) \Rightarrow ((r1_xreal_0 (k1_rpr_1 \\ X0 X2) k6_numbers) \vee (k2_rpr_1 X0 X2 X1 = k10_real_1 (k1_rpr_1 X0 X1) \\ (k1_rpr_1 X0 X2)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_finset_1 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow ((k1_rpr_1 X0 X1 = k9_real_1 \\ np_1 (k1_rpr_1 X0 (k3_subset_1 X0 X1))) \wedge (k1_rpr_1 X0 (k3_subset_1 \\ X0 X1) = k9_real_1 np_1 (k1_rpr_1 X0 X1)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\neg(\neg r1_xreal_0 np_1 X0) \wedge (r1_xreal_0 \\ (k6_xcmplx_0 np_1 X0) k6_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 \\ X1)) \Rightarrow (k9_real_1 X0 X1 = k6_xcmplx_0 X0 X1) \end{aligned} \quad (8)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (m1_subset_1 \\ (k3_subset_1 X0 X1) (k1_zfmisc_1 X0)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v1_finset_1 X0) \wedge ((m1_subset_1 \\ X1 (k1_zfmisc_1 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0)))) \Rightarrow (m1_subset_1 \\ (k2_rpr_1 X0 X1 X2) k1_numbers) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_finset_1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ X0))) \Rightarrow (m1_subset_1 (k1_rpr_1 X0 X1) k1_numbers) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (k3_subset_1 \\ X0 X1 = k4_xboole_0 X0 X1) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_finset_1 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ & (k1_zfmisc_1 X0)) \Rightarrow ((r1_xboole_0 X1 X2) \Rightarrow ((r1_xxreal_0 (k1_rpr_1 \\ & X0 X1) k6_numbers) \vee ((r1_xxreal_0 np_1 (k1_rpr_1 X0 X2)) \vee (k2_rpr_1 \\ & X0 (k3_subset_1 X0 X2) (k3_subset_1 X0 X1) = k9_real_1 np_1 (k10_real_1 \\ & (k1_rpr_1 X0 X1) (k9_real_1 np_1 (k1_rpr_1 X0 X2)))))))))) \end{aligned}$$