

l14_xxreal_0 (TM-
GaY1XXkmRfDzHzu18KUroGLEhqX1bH2yG)

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Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xxreal_0 : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k2_arytm_2 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_arytm_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xxreal_0 : \iota$ be given. Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1)) \quad (1)$$

Assume the following.

$$\neg k1_xxreal_0 \in k2_zfmisc_1 (k1_tarski k6_numbers) k2_arytm_2 \quad (2)$$

Assume the following.

$$\neg k1_xxreal_0 \in k2_arytm_2 \quad (3)$$

Assume the following.

$$v1_xxreal_0 k1_xxreal_0 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((X0 \in k2_arytm_2) \wedge (X1 \in k2_arytm_2)) \Rightarrow ((r1_xxreal_0 X0 X1) \Leftrightarrow (\exists X2. \\ & (m1_subset_1 X2 k2_arytm_2) \wedge (\exists X3.(m1_subset_1 X3 k2_arytm_2) \wedge \\ & ((X0 = X2) \wedge ((X1 = X3) \wedge (r1_arytm_2 X2 X3)))))) \wedge (((X0 \in k2_zfmisc_1 \\ & (k1_tarski k6_numbers) k2_arytm_2) \wedge (X1 \in k2_zfmisc_1 (k1_tarski \\ & k6_numbers) k2_arytm_2)) \Rightarrow ((r1_xxreal_0 X0 X1) \Leftrightarrow (\exists X2.(\\ & m1_subset_1 X2 k2_arytm_2) \wedge (\exists X3.(m1_subset_1 X3 k2_arytm_2) \wedge \\ & ((X0 = k4_tarski k6_numbers X2) \wedge ((X1 = k4_tarski k6_numbers X3) \wedge \\ & (r1_arytm_2 X3 X2)))))) \wedge (\neg(\neg(X0 \in k2_arytm_2) \wedge (X1 \in k2_arytm_2)) \wedge \\ & (\neg(X0 \in k2_zfmisc_1 (k1_tarski k6_numbers) k2_arytm_2) \wedge (X1 \in \\ & k2_zfmisc_1 (k1_tarski k6_numbers) k2_arytm_2)) \wedge (\neg(r1_xxreal_0 \\ & X0 X1) \Leftrightarrow (\neg(\neg(X1 \in k2_arytm_2) \wedge (X0 \in k2_zfmisc_1 (k1_tarski k6_numbers) \\ & k2_arytm_2)) \wedge ((X0 \neq k2_xxreal_0) \wedge (X1 \neq k1_xxreal_0))))))))) \quad (5) \end{aligned}$$

Theorem 1

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow ((r1_xxreal_0 k1_xxreal_0 X0) \Rightarrow (X0 = k1_xxreal_0))$$