

l90_prepower (TMavdXD- wkxWdUPx8eGz1ZQwQXXS9FcMB78W)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k9_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_numbers : \iota$ 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 $v2_comseq_2 : \iota \Rightarrow o$ be given. Let $k8_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_seq_2 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_rat_1 : \iota \Rightarrow o$ be given. Let $k6_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_seq_2 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 X0 X1) \wedge ((\neg v2_xxreal_0 X0) \wedge (\neg v3_xxreal_0 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.((v5_relat_1 X1 k3_numbers) \wedge ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow ((v2_comseq_2 X1) \Rightarrow ((r1_xxreal_0 X0 k6_numbers) \vee (v2_comseq_2 (k8_prepower X0 X1)))))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\exists X1.((v5_relat_1 X1 k3_numbers) \wedge ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \wedge ((v2_comseq_2 X1) \wedge ((k2_seq_2 X1 = X0) \wedge (\forall X2.(m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow (r1_xxreal_0 (k1_seq_1 X1 X2) X0)))))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_rat_1 X1) \Rightarrow (\neg(\neg r1_xxreal_0 X0 k6_numbers) \wedge (r1_xxreal_0 (k6_prepower X0 X1) k6_numbers))) \quad (4)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (((v2_comseq_2 X0) \wedge (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow \\ & (r1_xxreal_0 k6_numbers (k1_seq_1 X0 X1)))) \Rightarrow (r1_xxreal_0 k6_numbers \\ & (k2_seq_2 X0))) \quad (6) \end{aligned}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (7)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (k2_seq_2 X0 = k1_seq_2 X0) \quad (9) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_valued_0 X0))) \Rightarrow (k1_seq_1 X0 X1 = k1_funct_1 X0 X1) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v5_relat_1 X0 k3_numbers) \wedge (v1_funct_1 X0))) \Rightarrow (v1_rat_1 (k1_funct_1 X0 X1)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_rat_1 X1)) \Rightarrow (v1_xreal_0 (k6_prepower X0 X1)) \quad (12)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (13)$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1_xreal_0 X0) \wedge ((v5_relat_1 X1 k3_numbers) \wedge \\
& ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge (m1_subset_1 \\
& X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow (\\
& (v1_funct_1 (k8_prepower X0 X1) \wedge ((v1_funct_2 (k8_prepower X0 \\
& X1) k5_numbers k1_numbers) \wedge (m1_subset_1 (k8_prepower X0 X1) (\\
& k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers))))))
\end{aligned} \tag{14}$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \tag{15}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\
& (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))) \Rightarrow \\
& (v1_xreal_0 (k1_seq_2 X0))
\end{aligned} \tag{16}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (v1_xreal_0 X0) \Rightarrow (\forall X1. (v1_xreal_0 X1) \Rightarrow ((\neg r1_xxreal_0 \\
& X0 k6_numbers) \Rightarrow (\forall X2. (v1_xreal_0 X2) \Rightarrow ((X2 = k9_prepower \\
& X0 X1) \Leftrightarrow (\exists X3. ((v5_relat_1 X3 k3_numbers) \wedge ((v1_funct_1 \\
& X3) \wedge ((v1_funct_2 X3 k5_numbers k1_numbers) \wedge (m1_subset_1 X3 (\\
& k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \wedge ((v2_comseq_2 \\
& X3) \wedge ((k2_seq_2 X3 = X1) \wedge ((v2_comseq_2 (k8_prepower X0 X3) \wedge (k2_seq_2 \\
& (k8_prepower X0 X3) = X2))))))))))
\end{aligned} \tag{17}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (v1_xreal_0 X0) \Rightarrow (\forall X1. ((v5_relat_1 X1 k3_numbers) \wedge \\
& ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge (m1_subset_1 \\
& X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow (\forall X2. \\
& ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers k1_numbers) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow ((X2 = \\
& k8_prepower X0 X1) \Leftrightarrow (\forall X3. (m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow \\
& (k1_seq_1 X2 X3 = k6_prepower X0 (k1_seq_1 X1 X3))))))
\end{aligned} \tag{18}$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (v3_membered X0) \tag{19}$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \tag{20}$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v5_relat_1 X0 k3_numbers)) \Rightarrow ((v1_relat_1 X0) \wedge (v3_valued_0 X0)) \quad (21)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0) \wedge (v2_xxreal_0 X0)) \Rightarrow ((\neg v1_xboole_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (\neg v3_xxreal_0 X0))) \quad (22)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\neg v3_xxreal_0 X0) \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (24)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_xreal_0 X1)) \quad (25)$$

Theorem 1

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((\neg r1_xxreal_0 X0 k6_numbers) \Rightarrow (r1_xxreal_0 k6_numbers (k9_prepower X0 X1))))$$