

t58_power (TML- rtM9bmxDxV6UCRuPXrtm3aPBN3rsBZj1)

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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 $np_1 : \iota$ be given. Let $k5_power : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k3_power : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $v4_membered : \iota \Rightarrow o$ be given. Let $v5_membered : \iota \Rightarrow o$ be given. Let $v1_rat_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow ((v1_xboole_0 X0) \vee ((v2_xxreal_0 X1) \vee (v3_xxreal_0 X0))))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\neg(\neg r1_xxreal_0 X1 X0) \wedge ((\neg r1_xxreal_0 X2 k6_numbers) \wedge \\ & ((\neg r1_xxreal_0 np_1 X2) \wedge (r1_xxreal_0 (k3_power X2 X0) (k3_power \\ & X2 X1))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (v3_xxreal_0 X1)) \Rightarrow (v3_xxreal_0 X0))) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1)) \quad (5)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (6)$$

Assume the following.

$$r1_xxreal_0 \text{ } np_1 \text{ } np_1 \quad (7)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (8)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (9)$$

Assume the following.

$$v6_membered \text{ } k4_ordinal1 \quad (10)$$

Assume the following.

$$v1_xboole_0 \text{ } k1_xboole_0 \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xreal_0 \text{ } X0) \wedge (v1_xreal_0 \text{ } X1)) \Rightarrow (v1_xreal_0 \text{ } (k5_power \text{ } X0 \text{ } X1)) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_xreal_0 \text{ } X0) \Rightarrow (\forall X1. (v1_xreal_0 \text{ } X1) \Rightarrow (\neg(\neg \\ & r1_xxreal_0 \text{ } X0 \text{ } k6_numbers) \wedge ((X0 \neq np_1) \wedge ((\neg r1_xxreal_0 \text{ } X1 \text{ } k6_numbers) \wedge \\ & (\neg \forall X2. (v1_xreal_0 \text{ } X2) \Rightarrow ((X2 = k5_power \text{ } X0 \text{ } X1) \Leftrightarrow (k3_power \\ & X0 \text{ } X2 = X1))))))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xxreal_0 \text{ } X0) \wedge (v1_xxreal_0 \text{ } X1)) \Rightarrow (r1_xxreal_0 \text{ } X0 \text{ } X1) \vee (r1_xxreal_0 \text{ } X1 \text{ } X0) \quad (14)$$

Assume the following.

$$\forall X0. (v1_xreal_0 \text{ } X0) \Rightarrow (v1_xxreal_0 \text{ } X0) \quad (15)$$

Assume the following.

$$\forall X0. (v3_membered \text{ } X0) \Rightarrow (v2_membered \text{ } X0) \quad (16)$$

Assume the following.

$$\forall X0. ((v1_xxreal_0 \text{ } X0) \wedge (v2_xxreal_0 \text{ } X0)) \Rightarrow ((\neg v1_xboole_0 \text{ } X0) \wedge ((v1_xxreal_0 \text{ } X0) \wedge (\neg v3_xxreal_0 \text{ } X0))) \quad (17)$$

Assume the following.

$$\forall X0. (v4_membered \text{ } X0) \Rightarrow (v3_membered \text{ } X0) \quad (18)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k5_numbers) \Rightarrow (\neg v3_xxreal_0\ X0) \quad (19)$$

Assume the following.

$$\forall X0.(v5_membered\ X0) \Rightarrow (v4_membered\ X0) \quad (20)$$

Assume the following.

$$\forall X0.(v1_rat_1\ X0) \Rightarrow (v1_xxreal_0\ X0) \quad (21)$$

Assume the following.

$$\forall X0.(v6_membered\ X0) \Rightarrow (v5_membered\ X0) \quad (22)$$

Assume the following.

$$\forall X0.(v4_membered\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ X0) \Rightarrow (v1_rat_1\ X1)) \quad (23)$$

Assume the following.

$$\forall X0.(v2_membered\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ X0) \Rightarrow (v1_xxreal_0\ X1)) \quad (24)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xxreal_0\ X0) \Rightarrow (\forall X1.(v1_xxreal_0\ X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0\ X2) \Rightarrow (\neg(\neg r1_xxreal_0\ X0\ k6_numbers) \wedge ((\neg r1_xxreal_0 \\ & np_1\ X0) \wedge ((\neg r1_xxreal_0\ X1\ k6_numbers) \wedge ((\neg r1_xxreal_0\ X2\ X1) \wedge \\ & (r1_xxreal_0\ (k5_power\ X0\ X1)\ (k5_power\ X0\ X2)))))))))) \end{aligned}$$