

t55_prepower

(TMHv3LjK24ecRHwVjMCdoLB25FqrUzk8qsv)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v1_rat_1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k13_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_0 : \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_rat_1 X1) \Rightarrow ((\neg r1_xxreal_0 \\ X0 k6_numbers) \Rightarrow (k10_real_1 np_1 (k6_prepower X0 X1) = k6_prepower \\ X0 (k4_xcmplx_0 X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_rat_1 X1) \Rightarrow (\forall X2. \\ (v1_rat_1 X2) \Rightarrow ((\neg r1_xxreal_0 X0 k6_numbers) \Rightarrow (k3_xcmplx_0 (k6_prepower \\ X0 X1) (k6_prepower X0 X2) = k6_prepower X0 (k2_xcmplx_0 X1 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k7_xcmplx_0 np_1 X0 = k5_xcmplx_0 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$v1_xboole_0 \text{ np_}0 \quad (6)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(\quad (8)$$

$$k13_complex1 X0 X1 = k7_xcmplx_0 X0 X1)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers)\wedge(v1_xreal_0 \quad (9)$$

$$X1))\Rightarrow(k10_real_1 X0 X1 = k7_xcmplx_0 X0 X1)$$

Assume the following.

$$\forall X0.(v1_rat_1 X0)\Rightarrow((v1_xcmplx_0 (k4_xcmplx_0 X0))\wedge(v1_rat_1 \quad (10)$$

$$(k4_xcmplx_0 X0)))$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_rat_1 X1))\Rightarrow(v1_xreal_0 \quad (11)$$

$$(k6_prepower X0 X1))$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0)\Rightarrow(\forall X1.(v1_xcmplx_0 X1)\Rightarrow(k7_xcmplx_0 \quad (12)$$

$$X0 X1 = k3_xcmplx_0 X0 (k5_xcmplx_0 X1)))$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0)\Rightarrow(\forall X1.(v1_xcmplx_0 X1)\Rightarrow(k6_xcmplx_0 \quad (13)$$

$$X0 X1 = k2_xcmplx_0 X0 (k4_xcmplx_0 X1)))$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xcmplx_0 X0) \quad (14)$$

Assume the following.

$$\forall X0.(v1_rat_1 X0)\Rightarrow(v1_xreal_0 X0) \quad (15)$$

Theorem 1

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_rat_1 X1)\Rightarrow(\forall X2. \quad ($$

$$(v1_rat_1 X2)\Rightarrow((\neg r1_xreal_0 X0 k6_numbers)\Rightarrow(k13_complex1 ($$

$$k6_prepower X0 X1) (k6_prepower X0 X2) = k6_prepower X0 (k6_xcmplx_0$$

$$X1 X2))))))$$