

t28_power

(TMUeok4PuJKXc8dXuVK6iqQZsPvTrPJ6ucE)

October 27, 2020

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 $k3_power : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k9_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $k4_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((\neg r1_xxreal_0 X0 k6_numbers) \Rightarrow (k9_prepower X0 (k4_xcmplx_0 X1) = k10_real_1 np_1 (k9_prepower X0 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((v1_xcmplx_0 (k4_xcmplx_0 X0)) \wedge (v1_xreal_0 (k4_xcmplx_0 X0))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (v1_xreal_0 (k3_power X0 X1)) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow (((\neg r1_xxreal_0 X0 k6_numbers) \Rightarrow ((X2 = k3_power X0 X1) \Leftrightarrow (X2 = k9_prepower X0 X1))) \wedge (((X0 = k6_numbers) \Rightarrow ((r1_xxreal_0 X1 k6_numbers) \vee ((X2 = k3_power X0 X1) \Leftrightarrow (X2 = k6_numbers)))))) \wedge ((v1_int_1 X1) \Rightarrow ((X2 = k3_power X0 X1) \Leftrightarrow (\exists X3.(v1_int_1 X3) \wedge ((X3 = X1) \wedge (X2 = k4_prepower X0 X3)))))))) \quad (4)$$

Theorem 1

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((\neg r1_xxreal_0 X0 k6_numbers) \Rightarrow (k3_power X0 (k4_xcmplx_0 X1) = k10_real_1 np_1 (k3_power X0 X1))))$$