

t33_power

(TMQH8dxkwgrDbErEkzS7K5BNP2NreEP8TYw)

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 $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $k4_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow ((\neg r1_xxreal_0 X0 k6_numbers) \Rightarrow (k9_prepower \\ & (k9_prepower X0 X1) X2 = k9_prepower X0 (k3_xcmplx_0 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg \\ & r1_xxreal_0 X0 k6_numbers) \wedge (r1_xxreal_0 (k9_prepower X0 X1) k6_numbers))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (v1_xreal_0 \\ & (k3_xcmplx_0 X0 X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (v1_xreal_0 \\ & (k9_prepower X0 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (((\neg r1_xxreal_0 X0 k6_numbers) \Rightarrow ((X2 = k3_power \\ & X0 X1) \Leftrightarrow (X2 = k9_prepower X0 X1))) \wedge (((X0 = k6_numbers) \Rightarrow ((r1_xxreal_0 \\ & X1 k6_numbers) \vee ((X2 = k3_power X0 X1) \Leftrightarrow (X2 = k6_numbers)))))) \wedge ((v1_int_1 \\ & X1) \Rightarrow ((X2 = k3_power X0 X1) \Leftrightarrow (\exists X3.(v1_int_1 X3) \wedge ((X3 = X1) \wedge \\ & (X2 = k4_prepower X0 X3)))))))))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow ((\neg r1_xreal_0 X0 \text{ k6_numbers}) \Rightarrow (k3_power (k3_power \\ & X0 X1) X2 = k3_power X0 (k3_xcmplx_0 X1 X2)))))) \end{aligned}$$