

l128_quaterni

(TMKaC4mdeV9TD6ojcUtzVAzBCpL2abKxz2M)

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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 $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (((r1_xxreal_0 \\ & X0 X1) \wedge (r1_xxreal_0 X2 X3)) \Rightarrow (r1_xxreal_0 (k2_xcmplx_0 X0 X2) (\\ & k2_xcmplx_0 X1 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (v1_xreal_0 (k2_xcmplx_0 X0 X1)) \quad (2)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (\forall X4.(v1_xreal_0 \\ & X4) \Rightarrow (\forall X5.(v1_xreal_0 X5) \Rightarrow (\forall X6.(v1_xreal_0 X6) \Rightarrow \\ & (\forall X7.(v1_xreal_0 X7) \Rightarrow (\forall X8.(v1_xreal_0 X8) \Rightarrow (\forall X9. \\ & (v1_xreal_0 X9) \Rightarrow (\forall X10.(v1_xreal_0 X10) \Rightarrow (\forall X11. \\ & (v1_xreal_0 X11) \Rightarrow (((r1_xxreal_0 X6 X0) \wedge ((r1_xxreal_0 X7 X1) \wedge \\ & ((r1_xxreal_0 X8 X2) \wedge ((r1_xxreal_0 X9 X3) \wedge ((r1_xxreal_0 X10 X4) \wedge \\ & (r1_xxreal_0 X11 X5)))))) \Rightarrow (r1_xxreal_0 (k2_xcmplx_0 (k2_xcmplx_0 \\ & (k2_xcmplx_0 (k2_xcmplx_0 (k2_xcmplx_0 X6 X7) X8) X9) X10) X11) \\ & (k2_xcmplx_0 (k2_xcmplx_0 (k2_xcmplx_0 (k2_xcmplx_0 (k2_xcmplx_0 \\ & X0 X1) X2) X3) X4) X5)))))))))) \end{aligned}$$