

t25_quatern2

(TMQwTWVovBXfmvYoC6ushNTXck2GBu3BmcG)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k31_quaterni : \iota \Rightarrow \iota$ be given. Let $k6_quaterni : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $v1_quaterni : \iota \Rightarrow o$ be given. Let $k17_quaterni : \iota \Rightarrow \iota$ be given. Let $k18_quaterni : \iota \Rightarrow \iota$ be given. Let $k19_quaterni : \iota \Rightarrow \iota$ be given. Let $k20_quaterni : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_quaterni : \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v1_quaterni X0) \Rightarrow & (k31_quaterni X0 = k6_quaterni (k17_quaterni \\ & X0) (k1_real_1 (k18_quaterni X0)) (k1_real_1 (k19_quaterni X0)) \\ & (k1_real_1 (k20_quaterni X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow & (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 k1_numbers) \Rightarrow ((k17_quaterni (k6_quaterni X0 X1 \\ & X2 X3) = X0) \wedge ((k18_quaterni (k6_quaterni X0 X1 X2 X3) = X1) \wedge ((k19_quaterni \\ & (k6_quaterni X0 X1 X2 X3) = X2) \wedge (k20_quaterni (k6_quaterni X0 X1 \\ & X2 X3) = X3))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.((v1_xreal_0 X0) \wedge \\ ((v1_xreal_0 X1) \wedge ((v1_xreal_0 X2) \wedge (v1_xreal_0 X3)))) \Rightarrow & (m1_subset_1 \\ & (k6_quaterni X0 X1 X2 X3) k1_quaterni) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \tag{4}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_quaterni) \Rightarrow (v1_quaterni X0) \tag{5}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 k1_numbers) \Rightarrow (k31_quaterni (k6_quaterni X0 X1 \\ & X2 X3) = k6_quaterni X0 (k1_real_1 X1) (k1_real_1 X2) (k1_real_1 \\ & X3)))))) \end{aligned}$$