

t71_quatern3

(TMU5sBcDgEm74nVbNpRzk1Yvdjt3auEwncq)

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Let $v1_quaterni : \iota \Rightarrow o$ be given. Let $k27_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k29_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k26_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_quaterni : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (\forall X2. \\ & (v1_quaterni X2) \Rightarrow (\forall X3.(v1_quaterni X3) \Rightarrow (k26_quaterni \\ & (k29_quaterni (k29_quaterni X0 X1) X2) X3 = k26_quaterni (k29_quaterni \\ & (k29_quaterni X3 X2) X1) X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (\forall X2. \\ & (v1_quaterni X2) \Rightarrow (\forall X3.(v1_quaterni X3) \Rightarrow (k27_quaterni \\ & (k29_quaterni X0 X1) (k29_quaterni X2 X3) = k26_quaterni (k29_quaterni \\ & (k29_quaterni (k27_quaterni X0 X2) (k27_quaterni X1 X2)) (k27_quaterni \\ & X0 X3)) (k27_quaterni X1 X3)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1_quaterni X0) \wedge (v1_quaterni X1)) \Rightarrow (m1_subset_1 (k27_quaterni X0 X1) k1_quaterni) \tag{3}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_quaterni) \Rightarrow (v1_quaterni X0) \tag{4}$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (\forall X2. \\ & (v1_quaterni X2) \Rightarrow (\forall X3.(v1_quaterni X3) \Rightarrow (k27_quaterni \\ & (k29_quaterni X0 X1) (k29_quaterni X2 X3) = k27_quaterni (k29_quaterni \\ & X1 X0) (k29_quaterni X3 X2)))))) \end{aligned}$$