

t50_quatern3 (TM-
FUpdvRTWszg7qVsJCQVT49idZseBGs1Gk)

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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.

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

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (\forall X2. \\ & (v1_quaterni X2) \Rightarrow (k27_quaterni X0 (k26_quaterni X1 X2) = k26_quaterni \\ & (k27_quaterni X0 X1) (k27_quaterni X0 X2)))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_quaterni X0) \wedge (v1_quaterni X1)) \Rightarrow (m1_subset_1 (k29_quaterni X0 X1) k1_quaterni) \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_quaterni X0) \wedge (v1_quaterni X1)) \Rightarrow (m1_subset_1 (k27_quaterni X0 X1) k1_quaterni) \tag{5}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_quaterni X0) \wedge (v1_quaterni X1)) \Rightarrow (k26_quaterni X0 X1 = k26_quaterni X1 X0) \tag{6}$$

Assume the following.

$$\forall X0.(m1_subset.1 X0 k1_quaterni) \Rightarrow (v1_quaterni X0) \quad (7)$$

Theorem 1

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