

t57_quatern3 (TM-
FVeKXo11f4Z9qLcsuzcFMWeuGCTvEwWWr)

October 27, 2020

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.

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

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (\forall X2. \\ & (v1_quaterni X2) \Rightarrow (k27_quaterni (k29_quaterni X0 X1) X2 = k29_quaterni \\ & (k27_quaterni X0 X2) (k27_quaterni X1 X2)))) \end{aligned} \tag{3}$$

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.

$$\forall X0.(m1_subset_1 X0 k1_quaterni) \Rightarrow (v1_quaterni X0) \tag{6}$$

Theorem 1

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