

t30_quatern3

(TMGPa3i116dsmNtLvQmyphps6vEB23gbfUx)

October 27, 2020

Let $v1_quaterni : \iota \Rightarrow o$ be given. Let $k5_square_1 : \iota \Rightarrow \iota$ be given. Let $k3_quatern2 : \iota \Rightarrow \iota$ be given. Let $k27_quaterni : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_quaterni : \iota$ be given. Assume the following.

$$\forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (k5_square_1 (k3_quatern2 (k27_quaterni X0 X1)) = k8_real_1 (k5_square_1 (k3_quatern2 X0)) (k5_square_1 (k3_quatern2 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v1_quaterni X0) \wedge (v1_quaterni X1)) \Rightarrow (m1_subset_1 (k27_quaterni X0 X1) k1_quaterni) \quad (2)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_quaterni) \Rightarrow (v1_quaterni X0) \quad (3)$$

Theorem 1

$$\forall X0.(v1_quaterni X0) \Rightarrow (\forall X1.(v1_quaterni X1) \Rightarrow (\forall X2.(v1_quaterni X2) \Rightarrow (k5_square_1 (k3_quatern2 (k27_quaterni (k27_quaterni X0 X1) X2)) = k8_real_1 (k8_real_1 (k5_square_1 (k3_quatern2 X0)) (k5_square_1 (k3_quatern2 X1))) (k5_square_1 (k3_quatern2 X2))))))$$