

t2_topreal3

(TMFpy94WVsYkimxHLewbjCsGpBnuTpNRgc7)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k17_euclid : \iota \Rightarrow \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $k19_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (k3_rlvect_1 (k15_euclid np_2) X0 X1 = k19_euclid (k7_real_1 (\\ & k17_euclid X0) (k17_euclid X1)) (k7_real_1 (k18_euclid X0) (k18_euclid \\ & X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((k17_euclid \\ & (k19_euclid X0 X1) = X0) \wedge (k18_euclid (k19_euclid X0 X1) = X1))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 \\ & X1)) \Rightarrow (m1_subset_1 (k7_real_1 X0 X1) k1_numbers) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (m1_subset_1 (k18_euclid X0) k1_numbers) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (m1_subset_1 (k17_euclid X0) k1_numbers) \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \tag{6}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & ((k17_euclid (k3_rlvect_1 (k15_euclid np_2) X0 X1) = k7_real_1 \\ & (k17_euclid X0) (k17_euclid X1)) \wedge (k18_euclid (k3_rlvect_1 (k15_euclid \\ & np_2) X0 X1) = k7_real_1 (k18_euclid X0) (k18_euclid X1)))) \end{aligned}$$