

t11_sprect_2

(TMNh8wE1xZALEfGg3Eq7fHGGEJGg6N6w5yKm)

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Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $k9_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k17_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k17_euclid : \iota \Rightarrow \iota$ be given. Let $k1_rltopsp1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k19_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k8_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k7_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k13_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k10_pscomp_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
 & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
 & (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
 & (((r1_xxreal_0 (k17_euclid X0) (k17_euclid X1)) \wedge ((r1_xxreal_0 \\
 & (k17_euclid X1) (k17_euclid X2)) \wedge ((k18_euclid X0 = k18_euclid \\
 & X1) \wedge (k18_euclid X1 = k18_euclid X2)))) \Rightarrow (X1 \in k1_rltopsp1 (k15_euclid \\
 & np_2) X0 X2))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \tag{2}$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((k17_euclid \\
 (k19_euclid X0 X1) = X0) \wedge (k18_euclid (k19_euclid X0 X1) = X1))) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1.((\neg v1_xboole_0 X1) \wedge ((v2_compts_1 X1 (k15_euclid \\ & np_2)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ & np_2)))))) \Rightarrow ((X0 \in X1) \Rightarrow ((r1_xxreal_0 (k6_pscomp_1 X1) (k17_euclid \\ & X0)) \wedge ((r1_xxreal_0 (k17_euclid X0) (k8_pscomp_1 X1)) \wedge ((r1_xxreal_0 \\ & (k9_pscomp_1 X1) (k18_euclid X0)) \wedge (r1_xxreal_0 (k18_euclid X0) \\ & (k7_pscomp_1 X1))))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (m1_subset_1 (k8_pscomp_1 X0) k1_numbers) \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (m1_subset_1 (k6_pscomp_1 X0) k1_numbers) \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow (m1_subset_1 (k18_euclid X0) k1_numbers) \quad (8)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (m1_subset_1 (k13_pscomp_1 X0) (u1_struct_0 (k15_euclid np_2))) \quad (9)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (m1_subset_1 (k10_pscomp_1 X0) (u1_struct_0 (k15_euclid np_2))) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(X2 = k3_xboole_0 X0 X1) \Leftrightarrow (\forall X3. \\ & (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ & np_2)))) \Rightarrow (k17_pscomp_1 X0 = k9_subset_1 (u1_struct_0 (k15_euclid \\ & np_2)) (k1_rltopsp1 (k15_euclid np_2) (k10_pscomp_1 X0) (k13_pscomp_1 \\ & X0)) X0) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (k13_pscomp_1 X0 = k19_euclid (k8_pscomp_1 X0) (k9_pscomp_1 X0)) \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (k10_pscomp_1 X0 = k19_euclid (k6_pscomp_1 X0) (k9_pscomp_1 X0)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (15)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (16)$$

Theorem 1

$$\forall X0.((v2_compts_1 X0 (k15_euclid np_2)) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow (((X1 \in X0) \wedge (k18_euclid X1 = k9_pscomp_1 X0)) \Rightarrow (X1 \in k17_pscomp_1 X0))))$$