

t5_sprect_3 (TMQ-
DUS92VJpybA2BmZMqVZJyMttSp2GUGSE)

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Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. 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 $k1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $np_0 : \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 (k15_euclid X0))) \Rightarrow (\forall X2.(\\ & m1_subset_1 X2 (u1_struct_0 (k15_euclid X0))) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 k1_numbers) \Rightarrow ((X1 = k3_rlvect_1 (k15_euclid X0) (k1_rlvect_1 \\ & (k15_euclid X0) X1 (k9_real_1 np_1 X3)) (k1_rlvect_1 (k15_euclid \\ & X0) X2 X3)) \Rightarrow ((r1_xxreal_0 X3 k1_xboole_0) \vee (X1 = X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & (k15_euclid X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (\\ & k15_euclid X0))) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (k1_rlvect_1 (\\ & k15_euclid X0) (k3_rlvect_1 (k15_euclid X0) X1 X2) X3 = k3_rlvect_1 \\ & (k15_euclid X0) (k1_rlvect_1 (k15_euclid X0) X1 X3) (k1_rlvect_1 \\ & (k15_euclid X0) X2 X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$v1_xboole_0 \ np_0 \quad (6)$$

Assume the following.

$$k6_xcmplx_0 \ np_1 \ (k7_xcmplx_0 \ np_1 \ np_2) = k7_xcmplx_0 \ np_1 \ np_2 \quad (7)$$

Assume the following.

$$\neg r1_xreal_0 \ (k7_xcmplx_0 \ np_1 \ np_2) \ np_0 \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 \ X0) \wedge ((\neg v1_xboole_0 \ X1) \wedge \\ & (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & \quad X2 \ X0 \ X1) \Leftrightarrow (m1_subset_1 \ X2 \ X1)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_numbers) \wedge (v1_xreal_0 \\ & \quad X1)) \Rightarrow (k9_real_1 \ X0 \ X1 = k6_xcmplx_0 \ X0 \ X1) \end{aligned} \quad (10)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_numbers) \wedge (v1_xreal_0 \\ & \quad X1)) \Rightarrow (k10_real_1 \ X0 \ X1 = k7_xcmplx_0 \ X0 \ X1) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_xreal_0 \ X0) \wedge (v1_xreal_0 \ X1)) \Rightarrow (v1_xreal_0 \\ & \quad (k7_xcmplx_0 \ X0 \ X1)) \end{aligned} \quad (13)$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_numbers) \wedge (v1_xreal_0 \\ & \quad X1)) \Rightarrow (m1_subset_1 \ (k9_real_1 \ X0 \ X1) \ k1_numbers) \end{aligned} \quad (15)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (17)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (18)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (19)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 (k15_euclid X0))) \Rightarrow (\forall X2.(\\ & m1_subset_1 X2 (u1_struct_0 (k15_euclid X0))) \Rightarrow ((X1 = k1_rlvect_1 \\ & (k15_euclid X0) (k3_rlvect_1 (k15_euclid X0) X1 X2) (k10_real_1 \\ & np_1 np_2)) \Rightarrow (X1 = X2)))) \end{aligned}$$