

t24\_toprealb  
(TMNkexxuqCvTsjtCbeSJ7fvVuiQuHGZhEW)

October 27, 2020

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  $k11\_toprealb : \iota \Rightarrow \iota$  be given. Let  $k9\_toprealb : \iota$  be given. Let  $k18\_euclid : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k10\_toprealb : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k19\_euclid : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k17\_euclid : \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k3\_square\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $m1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k8\_toprealb : \iota \Rightarrow \iota$  be given. Let  $k12\_euclid : \iota \Rightarrow \iota$  be given. Let  $k7\_square\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_square\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v2\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $np\_0 : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v1\_toprealb : \iota \Rightarrow o$  be given. Let  $l1\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $l1\_rlvect1 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v5\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $v1\_compts1 : \iota \Rightarrow o$  be given. Let  $v1\_borsuk2 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (X0 = k19\_euclid (k17\_euclid X0) (k18\_euclid X0)) \quad (2)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (\neg(k3\_square\_1 X0 = np\_1) \wedge ((X0 \neq np\_1) \wedge (X0 \neq k4\_xcmplx\_0 np\_1))) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k3\_xcmplx\_0 X0 k6\_numbers = k6\_numbers) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\forall X1. \\ & ((\neg v2\_struct\_0 X1) \wedge (m1\_pre\_topc X1 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & X2 (u1\_struct\_0 X1)) \Rightarrow (m1\_subset\_1 X2 (u1\_struct\_0 X0)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k8\_toprealb np\_2))) \Rightarrow \\ & (\neg m1\_subset\_1 X0 (u1\_struct\_0 (k11\_toprealb X0))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & ((k12\_euclid X0 = k7\_square\_1 (k7\_real\_1 (k5\_square\_1 (k17\_euclid \\ & X0)) (k5\_square\_1 (k18\_euclid X0)))) \wedge (k5\_square\_1 (k12\_euclid \\ & X0) = k7\_real\_1 (k5\_square\_1 (k17\_euclid X0)) (k5\_square\_1 (k18\_euclid \\ & X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k2\_xcmplx\_0 X0 \text{ k6\_numbers} = X0) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X0 k5\_numbers)) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow ( \\ & (m1\_subset\_1 X1 (u1\_struct\_0 (k8\_toprealb X0))) \Rightarrow (k12\_euclid \\ & X1 = np\_1))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_2) \wedge (m2\_subset\_1 np\_2 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_2 k5\_numbers) \wedge (m1\_subset\_1 np\_2 k1\_numbers)) \end{aligned} \quad (10)$$

Assume the following.

$$\neg v1\_xboole\_0 np\_2 \quad (11)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \end{aligned} \quad (12)$$

Assume the following.

$$(m2\_subset\_1 np\_0 k1\_numbers k5\_numbers) \wedge ((m1\_subset\_1 np\_0 k5\_numbers) \wedge (m1\_subset\_1 np\_0 k1\_numbers)) \quad (13)$$

Assume the following.

$$v1\_xboole\_0 np\_0 \quad (14)$$

Assume the following.

$$k3\_xcmplx\_0 \text{ } np\_1 \text{ } np\_1 = np\_1 \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. ((m1\_subset\_1 \text{ } X0 \text{ } k1\_numbers) \wedge (v1\_xreal\_0 \text{ } X1)) \Rightarrow (k7\_real\_1 \text{ } X0 \text{ } X1 = k2\_xcmplx\_0 \text{ } X0 \text{ } X1) \quad (16)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (17)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \text{ } X0 \text{ } k1\_numbers) \Rightarrow (k5\_square\_1 \text{ } X0 = k3\_square\_1 \text{ } X0) \quad (18)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (19)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \text{ } X0 \text{ } k1\_numbers) \Rightarrow (k1\_real\_1 \text{ } X0 = k4\_xcmplx\_0 \text{ } X0) \quad (20)$$

Assume the following.

$$v6\_membered \text{ } k4\_ordinal1 \quad (21)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \text{ } X0 \text{ } (u1\_struct\_0 \text{ } (k8\_toprealb \text{ } np\_2))) \Rightarrow ((\neg v2\_struct\_0 \text{ } (k11\_toprealb \text{ } X0)) \wedge (v1\_pre\_topc \text{ } (k11\_toprealb \text{ } X0))) \quad (22)$$

Assume the following.

$$v1\_toprealb \text{ } (k8\_toprealb \text{ } np\_2) \quad (23)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc \text{ } X0) \Rightarrow (\forall X1. (m1\_pre\_topc \text{ } X1 \text{ } X0) \Rightarrow (l1\_pre\_topc \text{ } X1)) \quad (24)$$

Assume the following.

$$\forall X0. (l1\_rltopsp1 \text{ } X0) \Rightarrow ((l1\_rlvect\_1 \text{ } X0) \wedge (l1\_pre\_topc \text{ } X0)) \quad (25)$$

Assume the following.

$$m1\_subset\_1 \text{ } k9\_toprealb \text{ } (u1\_struct\_0 \text{ } (k8\_toprealb \text{ } np\_2)) \quad (26)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(m1\_pre\_topc\ (k8\_toprealb\ X0)\ (k15\_euclid\ X0)) \quad (27)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(m1\_subset\_1\ (k5\_square\_1\ X0)\ k1\_numbers) \quad (28)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_2)))\Rightarrow(m1\_subset\_1\ (k17\_euclid\ X0)\ k1\_numbers) \quad (29)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow((v5\_rltopsp1\ (k15\_euclid\ X0))\wedge(l1\_rltopsp1\ (k15\_euclid\ X0))) \quad (30)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_struct\_0\ (k8\_toprealb\ np\_2)))\Rightarrow((v1\_pre\_topc\ (k11\_toprealb\ X0))\wedge(m1\_pre\_topc\ (k11\_toprealb\ X0)\ (k8\_toprealb\ np\_2))) \quad (31)$$

Assume the following.

$$k10\_toprealb = k19\_euclid\ (k1\_real\_1\ np\_1)\ k6\_numbers \quad (32)$$

Assume the following.

$$k9\_toprealb = k19\_euclid\ np\_1\ k6\_numbers \quad (33)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0)\Rightarrow(k3\_square\_1\ X0 = k3\_xcmplx\_0\ X0\ X0) \quad (34)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(k7\_real\_1\ X0\ X1 = k7\_real\_1\ X1\ X0) \quad (35)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xreal\_0\ X0) \quad (36)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xcmplx\_0\ X0) \quad (37)$$

Assume the following.

$$\forall X0.(m1\_pre\_topc\ X0\ (k15\_euclid\ np\_2))\Rightarrow((v1\_toprealb\ X0)\Rightarrow((\neg v2\_struct\_0\ X0)\wedge((v1\_compts\_1\ X0)\wedge(v1\_borsuk\_2\ X0))))\quad (38)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow(v7\_ordinal1\ X1))\quad (39)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_2)))\Rightarrow(((m1\_subset\_1\ X0\ (u1\_struct\_0\ (k11\_toprealb\ k9\_toprealb)))\wedge(k18\_euclid\ X0 = k6\_numbers))\Rightarrow(X0 = k10\_toprealb))$$