

# t25\_toprealb (TMKwzgJAKUS- GKnPg79J7PqyMn53MYyQ1wVa)

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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  $k11\_toprealb : \iota \Rightarrow \iota$  be given. Let  $k10\_toprealb : \iota$  be given. Let  $k18\_euclid : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k9\_toprealb : \iota$  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  $v2\_xxreal.0 : \iota \Rightarrow o$  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  $v1\_xxreal.0 : \iota \Rightarrow o$  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  $l1\_rlvect.1 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v5\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $v1\_compts.1 : \iota \Rightarrow o$  be given. Let  $v1\_borsuk.2 : \iota \Rightarrow o$  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.

$$\exists X0.(v1\_xboole\_0 \text{ } X0)\wedge((v1\_xcmplx\_0 \text{ } X0)\wedge((v1\_xxreal\_0 \text{ } X0)\wedge(v1\_xreal\_0 \text{ } X0))) \quad (21)$$

Assume the following.

$$v6\_membered \text{ } k4\_ordinal1 \quad (22)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 \text{ } X0 \text{ } (u1\_struct\_0 \text{ } (k8\_toprealb \text{ } np\_2)))\Rightarrow((\neg v2\_struct\_0 \text{ } (k11\_toprealb \text{ } X0))\wedge(v1\_pre\_topc \text{ } (k11\_toprealb \text{ } X0))) \quad (23)$$

Assume the following.

$$v1\_toprealb \text{ } (k8\_toprealb \text{ } np\_2) \quad (24)$$

Assume the following.

$$\forall X0.(l1\_pre\_topc \text{ } X0)\Rightarrow(\forall X1.(m1\_pre\_topc \text{ } X1 \text{ } X0)\Rightarrow(l1\_pre\_topc \text{ } X1)) \quad (25)$$

Assume the following.

$$\forall X0.(l1\_rltopsp1 X0) \Rightarrow ((l1\_rlvect\_1 X0) \wedge (l1\_pre\_topc X0)) \quad (26)$$

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.

$$m1\_subset\_1 k10\_toprealb (u1\_struct\_0 (k8\_toprealb np\_2)) \quad (32)$$

Assume the following.

$$k10\_toprealb = k19\_euclid (k1\_real\_1 np\_1) k6\_numbers \quad (33)$$

Assume the following.

$$k9\_toprealb = k19\_euclid np\_1 k6\_numbers \quad (34)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k3\_square\_1 X0 = k3\_xcmplx\_0 X0 X0) \quad (35)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow (k2\_xcmplx\_0 X0 X1 = k2\_xcmplx\_0 X1 X0) \quad (36)$$

Assume the following.

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

Assume the following.

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

Assume the following.

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

**Theorem 1**

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