

t26\_euclid (TML-  
TogR3uj575WGWFjGkwbJwRMNCZpkaD4t)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  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  $k3\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $l1\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $k1\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v3\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v5\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v6\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v7\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v8\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v5\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $l1\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (((v2\_rlvect\_1 X0) \wedge (l1\_algstr\_0 X0)) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 X0)))) \Rightarrow (k3\_rlvect\_1 X0 X1 X2 = k1\_algstr\_0 X0 X1 X2) \quad (1)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (((v2\_pre\_topc (k15\_euclid X0)) \wedge ((v13\_algstr\_0 (k15\_euclid X0)) \wedge ((v2\_rlvect\_1 (k15\_euclid X0)) \wedge ((v3\_rlvect\_1 (k15\_euclid X0)) \wedge ((v4\_rlvect\_1 (k15\_euclid X0)) \wedge ((v5\_rlvect\_1 (k15\_euclid X0)) \wedge ((v6\_rlvect\_1 (k15\_euclid X0)) \wedge ((v7\_rlvect\_1 (k15\_euclid X0)) \wedge ((v8\_rlvect\_1 (k15\_euclid X0)) \wedge (v5\_rltopsp1 (k15\_euclid X0)))))))))))))) \quad (2)$$

Assume the following.

$$\forall X0. (l2\_algstr\_0 X0) \Rightarrow ((l2\_struct\_0 X0) \wedge (l1\_algstr\_0 X0)) \quad (3)$$

Assume the following.

$$\forall X0. (l1\_rlvect\_1 X0) \Rightarrow (l2\_algstr\_0 X0) \quad (4)$$

Assume the following.

$$\forall X0. (l1\_rltopsp1 X0) \Rightarrow ((l1\_rlvect\_1 X0) \wedge (l1\_pre\_topc X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l1\_algstr\_0 X0)\wedge((m1\_subset\_1 X1 (u1\_struct\_0 X0))\wedge(m1\_subset\_1 X2 (u1\_struct\_0 X0))))\Rightarrow(m1\_subset\_1 (k1\_algstr\_0 X0 X1 X2) (u1\_struct\_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow((v5\_rltopsp1 (k15\_euclid X0))\wedge (l1\_rltopsp1 (k15\_euclid X0))) \quad (7)$$

Assume the following.

$$\forall X0.(l1\_algstr\_0 X0)\Rightarrow((v3\_rlvect\_1 X0)\Leftrightarrow(\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0))\Rightarrow(\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0))\Rightarrow(\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0))\Rightarrow(k1\_algstr\_0 X0 (k1\_algstr\_0 X0 X1 X2) X3 = k1\_algstr\_0 X0 X1 (k1\_algstr\_0 X0 X2 X3)))))) \quad (8)$$

**Theorem 1**

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid X0)))\Rightarrow(\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid X0)))\Rightarrow(\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 (k15\_euclid X0)))\Rightarrow(k3\_rlvect\_1 (k15\_euclid X0) (k3\_rlvect\_1 (k15\_euclid X0) X1 X2) X3 = k3\_rlvect\_1 (k15\_euclid X0) X1 (k3\_rlvect\_1 (k15\_euclid X0) X2 X3))))))$$