

## l20\_euclid\_6

(TMZ7ziRfu7cF29zcBfrp42GVxjTmsfyqQVw)

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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  $k2\_numbers : \iota$  be given. Let  $k2\_euclid\_3 : \iota \Rightarrow \iota$  be given. Let  $k5\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k1\_complex2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k17\_euclid : \iota \Rightarrow \iota$  be given. Let  $k18\_euclid : \iota \Rightarrow \iota$  be given. Let  $k4\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $k17\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k7\_square\_1 : \iota \Rightarrow \iota$  be given. Let  $k5\_square\_1 : \iota \Rightarrow \iota$  be given. Let  $k12\_euclid : \iota \Rightarrow \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_complex1 : \iota$  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  $k5\_numbers : \iota$  be given. Let  $k1\_xcmplx\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k16\_complex1 : \iota \Rightarrow \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v1\_membered : \iota \Rightarrow o$  be given. Let  $l1\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l1\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v5\_rltopsp1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k2\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k2\_numbers) \Rightarrow (k4\_complex1 (k1\_complex2 X0 X1) = k7\_real\_1 (k1\_real\_1 \\ & (k8\_real\_1 (k3\_complex1 X0) (k4\_complex1 X1))) (k8\_real\_1 (k4\_complex1 \\ & X0) (k3\_complex1 X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k2\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k2\_numbers) \Rightarrow (k3\_complex1 (k1\_complex2 X0 X1) = k7\_real\_1 (k8\_real\_1 \\ & (k3\_complex1 X0) (k3\_complex1 X1)) (k8\_real\_1 (k4\_complex1 X0) \\ & (k4\_complex1 X1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & (k17\_complex1 (k2\_euclid\_3 X0) = k12\_euclid X0) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow ((k3\_complex1 \\ (k2\_xcmplx\_0 X0 (k3\_xcmplx\_0 X1 k7\_complex1)) = X0) \wedge (k4\_complex1 \\ (k2\_xcmplx\_0 X0 (k3\_xcmplx\_0 X1 k7\_complex1)) = X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} ((v2\_xxreal\_0 np\_2) \wedge (m2\_subset\_1 np\_2 k1\_numbers k5\_numbers)) \wedge \\ ((m1\_subset\_1 np\_2 k5\_numbers) \wedge (m1\_subset\_1 np\_2 k1\_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$k7\_complex1 = k1\_xcmplx\_0 \quad (6)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k17\_complex1 X0 = k16\_complex1 X0) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ ((k17\_euclid (k5\_algstr\_0 (k15\_euclid np\_2) X0 X1) = k9\_real\_1 \\ (k17\_euclid X0) (k17\_euclid X1)) \wedge (k18\_euclid (k5\_algstr\_0 (k15\_euclid \\ np\_2) X0 X1) = k9\_real\_1 (k18\_euclid X0) (k18\_euclid X1)))) \end{aligned} \quad (9)$$

Assume the following.

$$v6\_membered k4\_ordinal1 \quad (10)$$

Assume the following.

$$v1\_membered k2\_numbers \quad (11)$$

Assume the following.

$$\forall X0.(l1\_rlvect\_1 X0) \Rightarrow (l2\_algstr\_0 X0) \quad (12)$$

Assume the following.

$$\forall X0.(l1\_rltopsp1 X0) \Rightarrow ((l1\_rlvect\_1 X0) \wedge (l1\_pre\_topc X0)) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((l2\_algstr\_0 X0) \wedge ((m1\_subset\_1 \\ X1 (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 X0)))) \Rightarrow (m1\_subset\_1 \\ (k5\_algstr\_0 X0 X1 X2) (u1\_struct\_0 X0)) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (m1\_subset\_1 (k18\_euclid X0) k1\_numbers) \quad (15)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (m1\_subset\_1 (k17\_euclid X0) k1\_numbers) \quad (16)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow ((v5\_rltopsp1 (k15\_euclid X0)) \wedge (l1\_rltopsp1 (k15\_euclid X0))) \quad (17)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (k2\_euclid\_3 X0 = k2\_xcmplx\_0 (k17\_euclid X0) (k3\_xcmplx\_0 (k18\_euclid X0) k7\_complex1)) \quad (18)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k16\_complex1 X0 = k7\_square\_1 (k7\_real\_1 (k5\_square\_1 (k3\_complex1 X0)) (k5\_square\_1 (k4\_complex1 X0)))) \quad (19)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xreal\_0 X0) \quad (20)$$

Assume the following.

$$\forall X0.(v6\_membered X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 X0) \Rightarrow (v7\_ordinal1 X1)) \quad (21)$$

Assume the following.

$$\forall X0.(v1\_membered X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 X0) \Rightarrow (v1\_xcmplx\_0 X1)) \quad (22)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2)))\Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2)))\Rightarrow \\ & (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid np\_2)))\Rightarrow \\ & (\forall X3.(m1\_subset\_1 X3 k2\_numbers)\Rightarrow(\forall X4.(m1\_subset\_1 \\ & X4 k2\_numbers)\Rightarrow(((X3 = k2\_euclid\_3 (k5\_algstr\_0 (k15\_euclid np\_2) \\ & X0 X1))\wedge(X4 = k2\_euclid\_3 (k5\_algstr\_0 (k15\_euclid np\_2) X2 X1)))\Rightarrow \\ & ((k3\_complex1 (k1\_complex2 X3 X4) = k7\_real\_1 (k8\_real\_1 (k9\_real\_1 \\ & (k17\_euclid X0) (k17\_euclid X1)) (k9\_real\_1 (k17\_euclid X2) (k17\_euclid \\ & X1))) (k8\_real\_1 (k9\_real\_1 (k18\_euclid X0) (k18\_euclid X1)) ( \\ & k9\_real\_1 (k18\_euclid X2) (k18\_euclid X1))))\wedge((k4\_complex1 ( \\ & k1\_complex2 X3 X4) = k7\_real\_1 (k1\_real\_1 (k8\_real\_1 (k9\_real\_1 \\ & (k17\_euclid X0) (k17\_euclid X1)) (k9\_real\_1 (k18\_euclid X2) (k18\_euclid \\ & X1)))) (k8\_real\_1 (k9\_real\_1 (k18\_euclid X0) (k18\_euclid X1)) \\ & (k9\_real\_1 (k17\_euclid X2) (k17\_euclid X1))))\wedge((k17\_complex1 \\ & X3 = k7\_square\_1 (k7\_real\_1 (k5\_square\_1 (k9\_real\_1 (k17\_euclid \\ & X0) (k17\_euclid X1))) (k5\_square\_1 (k9\_real\_1 (k18\_euclid X0) \\ & (k18\_euclid X1))))\wedge(k12\_euclid (k5\_algstr\_0 (k15\_euclid np\_2) \\ & X0 X1) = k17\_complex1 X3)))))))))) \end{aligned}$$