

## t43\_convex4

(TMEwUR6TuNdBEsAKKFWqdhub46UwwsxqLjf)

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Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k4\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k3\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k7\_complex1 : \iota$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((m1\_subset\_1 X0 k1\_numbers) \wedge (v1\_xreal\_0 X1)) \Rightarrow (k8\_real\_1 X0 X1 = k3\_xcmplx\_0 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xreal\_0 X0) \wedge (m1\_subset\_1 X1 k1\_numbers)) \Rightarrow (k4\_real\_1 X0 X1 = k3\_xcmplx\_0 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0. (v1\_xcmplx\_0 X0) \Rightarrow (k4\_complex1 X0 = k2\_complex1 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. (m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1. (v1\_xcmplx\_0 X1) \Rightarrow ((k3\_complex1 (k3\_xcmplx\_0 (k3\_xcmplx\_0 X0 k7\_complex1) X1) = k1\_real\_1 (k8\_real\_1 X0 (k4\_complex1 X1))) \wedge ((k4\_complex1 (k3\_xcmplx\_0 (k3\_xcmplx\_0 X0 k7\_complex1) X1) = k8\_real\_1 X0 (k3\_complex1 X1)) \wedge ((k3\_complex1 (k3\_xcmplx\_0 X0 X1) = k8\_real\_1 X0 (k3\_complex1 X1)) \wedge (k4\_complex1 (k3\_xcmplx\_0 X0 X1) = k8\_real\_1 X0 (k4\_complex1 X1)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. (v1\_xcmplx\_0 X0) \Rightarrow (v1\_xreal\_0 (k2\_complex1 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (m1\_subset\_1 (k4\_complex1 X0) k1\_numbers) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Leftrightarrow (X0 \in k1\_numbers) \quad (8)$$

**Theorem 1**

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0 X1) \Rightarrow (k4\_complex1 (k3\_xcmplx\_0 X0 X1) = k4\_real\_1 X0 (k4\_complex1 X1)))$$