

# t70\_complfld (TM- FyniTmM5Una3spacws3TnJqVtyBnKpeYC)

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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  $k1\_complfld : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k18\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k10\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k17\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k5\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k16\_complex1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0 X1) \Rightarrow (r1\_xxreal\_0 \\ (k17\_complex1 (k9\_real\_1 (k17\_complex1 X0) (k17\_complex1 X1)))) \\ (k17\_complex1 (k6\_xcmplx\_0 X0 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 k1\_complfld)) \Rightarrow (\forall X1. \\ (m1\_subset\_1 X1 (u1\_struct\_0 k1\_complfld)) \Rightarrow (\forall X2.(v1\_xcmplx\_0 \\ X2) \Rightarrow (\forall X3.(v1\_xcmplx\_0 X3) \Rightarrow (((X0 = X2) \wedge (X1 = X3)) \Rightarrow (k5\_algstr\_0 \\ k1\_complfld X0 X1 = k4\_binop\_2 X2 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers) \wedge (v1\_xreal\_0 X1)) \Rightarrow (k9\_real\_1 X0 X1 = k6\_xcmplx\_0 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow (k4\_binop\_2 X0 X1 = k6\_xcmplx\_0 X0 X1) \quad (4)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k18\_complex1 X0 = k16\_complex1 X0) \quad (5)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k17\_complex1 X0 = k16\_complex1 X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0)\wedge(v1\_xreal\_0 X1))\Rightarrow(k10\_binop\_2 X0 X1 = k6\_xcmplx\_0 X0 X1) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0)\Rightarrow(m1\_subset\_1 (k17\_complex1 X0) k1\_numbers) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0)\wedge(v1\_xreal\_0 X1))\Rightarrow(m1\_subset\_1 (k10\_binop\_2 X0 X1) k1\_numbers) \quad (9)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers)\Rightarrow(v1\_xreal\_0 X0) \quad (10)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers)\Rightarrow(v1\_xcmplx\_0 X0) \quad (11)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 k1\_complfld))\Rightarrow(v1\_xcmplx\_0 X0) \quad (12)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 k1\_complfld))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 k1\_complfld))\Rightarrow(r1\_xxreal\_0 (k18\_complex1 (k10\_binop\_2 (k17\_complex1 X0) (k17\_complex1 X1))) (k17\_complex1 (k5\_algstr\_0 k1\_complfld X0 X1))))$$