

# l90\_complex1 (TMaxHdgbLR- JQQ392rXNZEG5UcJm521USWSW)

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Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $k17\_complex1 : \iota \Rightarrow \iota$  be given. Let  $v3\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k16\_complex1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\neg(\neg r1\_xxreal\_0 X0 X1) \wedge ((\neg v3\_xxreal\_0 X1) \wedge (\neg v2\_xxreal\_0 X0)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (2)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow ((r1\_xxreal\_0 k6\_numbers X0) \Rightarrow (k17\_complex1 X0 = X0)) \quad (3)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (4)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (k1\_real\_1 X0 = k4\_xcmplx\_0 X0) \quad (5)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow ((r1\_xxreal\_0 X0 k6\_numbers) \Rightarrow (k17\_complex1 X0 = k4\_xcmplx\_0 X0)) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k4\_xcmplx\_0 (k4\_xcmplx\_0 X0) = X0) \quad (8)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow ((v1\_xreal\_0 (k16\_complex1 X0)) \wedge (\neg v3\_xxreal\_0 (k16\_complex1 X0))) \quad (9)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow ((v1\_xcmplx\_0 (k4\_xcmplx\_0 X0)) \wedge (v1\_xreal\_0 (k4\_xcmplx\_0 X0))) \quad (10)$$

Assume the following.

$$(v1\_xboole\_0 (k16\_complex1 k6\_numbers)) \wedge (v1\_xreal\_0 (k16\_complex1 k6\_numbers)) \quad (11)$$

Assume the following.

$$\forall X0.((\neg v3\_xxreal\_0 X0) \wedge (v1\_xreal\_0 X0)) \Rightarrow ((v1\_xcmplx\_0 (k4\_xcmplx\_0 X0)) \wedge (\neg v2\_xxreal\_0 (k4\_xcmplx\_0 X0))) \quad (12)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (m1\_subset\_1 (k17\_complex1 X0) k1\_numbers) \quad (13)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (v1\_xreal\_0 (k16\_complex1 X0)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow ((r1\_xxreal\_0 X0 X1) \vee (r1\_xxreal\_0 X1 X0)) \quad (15)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xxreal\_0 X0) \quad (16)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xcmplx\_0 X0) \quad (17)$$

**Theorem 1**

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow ((r1\_xxreal\_0 (k1\_real\_1 (k17\_complex1 X0)) X0) \wedge (r1\_xxreal\_0 X0 (k17\_complex1 X0)))$$