

t46_complex1 (TMUCo- RoFVqYgb6JV6Q1u25aYfz3DJ9LxgQR)

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Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k16_complex1 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg(v1_xboole_0 X0) \wedge ((X0 \neq X1) \wedge (v1_xboole_0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. (v1_xxreal_0 X0) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 X0 X1) \wedge ((\neg v2_xxreal_0 X0) \wedge (\neg v3_xxreal_0 X1)))) \quad (2)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (3)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 X0) \Rightarrow (k17_complex1 X0 = k16_complex1 X0) \quad (4)$$

Assume the following.

$$\exists X0. (v1_xboole_0 X0) \wedge ((v1_xcmplx_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X0))) \quad (5)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 X0) \Rightarrow ((v1_xxreal_0 (k16_complex1 X0)) \wedge (\neg v3_xxreal_0 (k16_complex1 X0))) \quad (6)$$

Assume the following.

$$(v1_xboole_0 (k16_complex1 k6_numbers)) \wedge (v1_xxreal_0 (k16_complex1 k6_numbers)) \quad (7)$$

Assume the following.

$$v1_xboole_0 \ k1_xboole_0 \tag{8}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 \ X0) \Rightarrow (v1_xreal_0 \ (k16_complex1 \ X0)) \tag{9}$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0) \Rightarrow (v1_xxreal_0 \ X0) \tag{10}$$

Assume the following.

$$\forall X0.((v1_xxreal_0 \ X0) \wedge (v2_xxreal_0 \ X0)) \Rightarrow ((\neg v1_xboole_0 \ X0) \wedge ((v1_xxreal_0 \ X0) \wedge (\neg v3_xxreal_0 \ X0))) \tag{11}$$

Theorem 1

$$\forall X0.(v1_xcmplx_0 \ X0) \Rightarrow (r1_xxreal_0 \ k6_numbers \ (k17_complex1 \ X0))$$