

t4\_xxreal\_3  
(TMU4gq5zErhUguuqZuuPBc5XXjnYvyabtt5)

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Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xxreal\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k1\_xxreal\_0 : \iota$  be given. Let  $k2\_xxreal\_0 : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $v3\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k2\_xcmplx\_0 X0 k6\_numbers = X0) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\neg(\neg X0 \in k1\_numbers) \wedge ((X0 \neq k1\_xxreal\_0) \wedge (X0 \neq k2\_xxreal\_0))) \quad (4)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (5)$$

Assume the following.

$$\exists X0.(v1\_xboole\_0 X0) \wedge ((v1\_xcmplx\_0 X0) \wedge ((v1\_xxreal\_0 X0) \wedge (v1\_xreal\_0 X0))) \quad (6)$$

Assume the following.

$$v3\_xxreal\_0 k2\_xxreal\_0 \quad (7)$$

Assume the following.

$$v2\_xxreal\_0 \ k1\_xxreal\_0 \quad (8)$$

Assume the following.

$$v1\_xxreal\_0 \ k2\_xxreal\_0 \quad (9)$$

Assume the following.

$$v1\_xxreal\_0 \ k1\_xxreal\_0 \quad (10)$$

Assume the following.

$$v1\_xboole\_0 \ k1\_xboole\_0 \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xxreal\_0 \ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 \ X1) \Rightarrow (\forall X2. \\ (v1\_xxreal\_0 \ X2) \Rightarrow (((v1\_xreal\_0 \ X0) \wedge (v1\_xreal\_0 \ X1)) \Rightarrow ((X2 = \\ k1\_xxreal\_3 \ X0 \ X1) \Leftrightarrow (\exists X3.(v1\_xcmplx\_0 \ X3) \wedge (\exists X4. \\ (v1\_xcmplx\_0 \ X4) \wedge ((X0 = X3) \wedge ((X1 = X4) \wedge (X2 = k2\_xcmplx\_0 \ X3 \ X4)))))) \wedge \\ (((((X0 = k1\_xxreal\_0) \wedge (X1 \neq k2\_xxreal\_0)) \vee ((X1 = k1\_xxreal\_0) \wedge \\ (X0 \neq k2\_xxreal\_0))) \Rightarrow ((X2 = k1\_xxreal\_3 \ X0 \ X1) \Leftrightarrow (X2 = k1\_xxreal\_0))) \wedge \\ (((((X0 = k2\_xxreal\_0) \wedge (X1 \neq k1\_xxreal\_0)) \vee ((X1 = k2\_xxreal\_0) \wedge \\ (X0 \neq k1\_xxreal\_0))) \Rightarrow ((X2 = k1\_xxreal\_3 \ X0 \ X1) \Leftrightarrow (X2 = k2\_xxreal\_0))) \wedge \\ (\neg(\neg(v1\_xreal\_0 \ X0) \wedge (v1\_xreal\_0 \ X1)) \wedge ((\neg(X0 = k1\_xxreal\_0) \wedge \\ (X1 \neq k2\_xxreal\_0)) \wedge ((\neg(X1 = k1\_xxreal\_0) \wedge (X0 \neq k2\_xxreal\_0)) \wedge \\ ((\neg(X0 = k2\_xxreal\_0) \wedge (X1 \neq k1\_xxreal\_0)) \wedge ((\neg(X1 = k2\_xxreal\_0) \wedge \\ (X0 \neq k1\_xxreal\_0)) \wedge (\neg(X2 = k1\_xxreal\_3 \ X0 \ X1) \Leftrightarrow (X2 = k6\_numbers))))))))))))) \end{aligned} \quad (12)$$

Assume the following.

$$k1\_xxreal\_0 = k1\_numbers \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 \ X0) \wedge (v1\_xxreal\_0 \ X1)) \Rightarrow ( \\ k1\_xxreal\_3 \ X0 \ X1 = k1\_xxreal\_3 \ X1 \ X0) \quad (14)$$

Assume the following.

$$\forall X0.((v1\_xboole\_0 \ X0) \wedge (v1\_xxreal\_0 \ X0)) \Rightarrow ((v1\_xxreal\_0 \ X0) \wedge ((\neg v2\_xxreal\_0 \ X0) \wedge (\neg v3\_xxreal\_0 \ X0))) \quad (15)$$

Assume the following.

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

Assume the following.

$$\forall X0.(m1\_subset\_1 \ X0 \ k1\_numbers) \Rightarrow (v1\_xreal\_0 \ X0) \quad (17)$$

**Theorem 1**  $\forall X0.(v1\_xxreal\_0 \ X0) \Rightarrow (k1\_xxreal\_3 \ X0 \ k6\_numbers = X0)$ .