

t8\_xxreal\_3 (TMZhQmDMzM-  
R.Ji63fCFtYvNmPvQRer7qZNSt)

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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  $k2\_xxreal\_3 : \iota \Rightarrow \iota$  be given. Let  $k1\_xxreal\_0 : \iota$  be given. Let  $k2\_xxreal\_0 : \iota$  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  $k1\_numbers : \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$k2\_xxreal\_3 \ k1\_xxreal\_0 = k2\_xxreal\_0 \quad (1)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1 \ X0 \ X1) \quad (3)$$

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.

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

Assume the following.

$$\exists X0.(v1\_xboole\_0 \ X0) \wedge ((v1\_xcmplx\_0 \ X0) \wedge ((v1\_xreal\_0 \ X0) \wedge (v1\_xreal\_0 \ X0))) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (k2\_xxreal\_3 (k2\_xxreal\_3 X0) = X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow ((X0 = X1) \Rightarrow (k2\_xxreal\_3 X0 = k4\_xcmplx\_0 X1)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_xreal\_0 X0) \wedge ((v1\_xreal\_0 X1) \wedge ((v1\_xcmplx\_0 X2) \wedge (v1\_xcmplx\_0 X3)))) \Rightarrow (((X0 = X2) \wedge (X1 = X3)) \Rightarrow (k1\_xxreal\_3 X0 X1 = k2\_xcmplx\_0 X2 X3)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0) \wedge ((v1\_xxreal\_0 X1) \wedge (\neg v1\_xreal\_0 X1))) \Rightarrow (\neg v1\_xreal\_0 (k1\_xxreal\_3 X0 X1)) \quad (11)$$

Assume the following.

$$v1\_xxreal\_0 k2\_xxreal\_0 \quad (12)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow ((v1\_xxreal\_0 (k2\_xxreal\_3 X0)) \wedge (v1\_xreal\_0 (k2\_xxreal\_3 X0))) \quad (13)$$

Assume the following.

$$v1\_xxreal\_0 k1\_xxreal\_0 \quad (14)$$

Assume the following.

$$\neg v1\_xreal\_0 k2\_xxreal\_0 \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow (v1\_xxreal\_0 (k1\_xxreal\_3 X0 X1)) \quad (16)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0 X1) \Rightarrow ((X1 = k4\_xcmplx\_0 X0) \Leftrightarrow (k2\_xcmplx\_0 X0 X1 = k6\_numbers))) \quad (17)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow ((v1\_xreal\_0 X0) \Rightarrow ((X1 = k2\_xxreal\_3 X0) \Leftrightarrow (\exists X2.(v1\_xcmplx\_0 X2) \wedge ((X0 = X2) \wedge (X1 = k4\_xcmplx\_0 X2)))))) \wedge (((X0 = k1\_xxreal\_0) \Rightarrow ((X1 = k2\_xxreal\_3 X0) \Leftrightarrow (X1 = k2\_xxreal\_0))) \wedge (\neg(\neg v1\_xreal\_0 X0) \wedge ((X0 \neq k1\_xxreal\_0) \wedge (\neg(X1 = k2\_xxreal\_3 X0) \Leftrightarrow (X1 = k1\_xxreal\_0)))))) \quad (18)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\
& (v1\_xxreal\_0 X2) \Rightarrow (((v1\_xreal\_0 X0) \wedge (v1\_xreal\_0 X1)) \Rightarrow ((X2 = \\
& k1\_xxreal\_3 X0 X1) \Leftrightarrow (\exists X3.(v1\_xcmplx\_0 X3) \wedge (\exists X4. \\
& (v1\_xcmplx\_0 X4) \wedge ((X0 = X3) \wedge ((X1 = X4) \wedge (X2 = k2\_xcmplx\_0 X3 X4)))))) \wedge \\
& (((((X0 = k1\_xxreal\_0) \wedge (X1 \neq k2\_xxreal\_0)) \vee ((X1 = k1\_xxreal\_0) \wedge \\
& (X0 \neq k2\_xxreal\_0))) \Rightarrow ((X2 = k1\_xxreal\_3 X0 X1) \Leftrightarrow (X2 = k1\_xxreal\_0))) \wedge \\
& (((((X0 = k2\_xxreal\_0) \wedge (X1 \neq k1\_xxreal\_0)) \vee ((X1 = k2\_xxreal\_0) \wedge \\
& (X0 \neq k1\_xxreal\_0))) \Rightarrow ((X2 = k1\_xxreal\_3 X0 X1) \Leftrightarrow (X2 = k2\_xxreal\_0))) \wedge \\
& (\neg(\neg(v1\_xreal\_0 X0) \wedge (v1\_xreal\_0 X1)) \wedge (\neg(X0 = k1\_xxreal\_0) \wedge \\
& (X1 \neq k2\_xxreal\_0)) \wedge (\neg(X1 = k1\_xxreal\_0) \wedge (X0 \neq k2\_xxreal\_0)) \wedge \\
& (\neg(X0 = k2\_xxreal\_0) \wedge (X1 \neq k1\_xxreal\_0)) \wedge (\neg(X1 = k2\_xxreal\_0) \wedge \\
& (X0 \neq k1\_xxreal\_0)) \wedge \neg(X2 = k1\_xxreal\_3 X0 X1) \Leftrightarrow (X2 = k6\_numbers))))))))) \\
& \tag{19}
\end{aligned}$$

Assume the following.

$$k1\_xxreal\_0 = k1\_numbers \tag{20}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow ( \\
& k1\_xxreal\_3 X0 X1 = k1\_xxreal\_3 X1 X0) \\
& \tag{21}
\end{aligned}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xcmplx\_0 X0) \tag{22}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xreal\_0 X0) \tag{23}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (( \\
& k1\_xxreal\_3 X0 X1 = k6\_numbers) \Rightarrow (X0 = k2\_xxreal\_3 X1)))
\end{aligned}$$