

t52_xxreal_3 (TMQNVLuZDhaovEC-
FUZky3MXx7sQc2Q8CdYm)

October 27, 2020

Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xxreal_0 : \iota$ be given. Let $k2_xxreal_0 : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (r1_xxreal_0 k2_xxreal_0 X0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow ((r1_xxreal_0 (k3_xxreal_3 X2 X1) X0) \Rightarrow (((X0 = \\ & k2_xxreal_0) \wedge ((X1 = k1_xxreal_0) \wedge (\neg r1_xxreal_0 X2 k6_numbers)))) \vee \\ & (((X0 = k1_xxreal_0) \wedge ((X1 = k2_xxreal_0) \wedge (\neg r1_xxreal_0 X2 k6_numbers))) \vee \\ & (r1_xxreal_0 X2 (k1_xxreal_3 X0 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (r1_xxreal_0 X0 k1_xxreal_0) \quad (3)$$

Assume the following.

$$v1_xxreal_0 k1_xxreal_0 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (v1_xxreal_0 (k1_xxreal_3 X0 X1)) \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\
& (v1_xxreal_0 X2) \Rightarrow (((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow ((X2 = \\
& k1_xxreal_3 X0 X1) \Leftrightarrow (\exists X3.(v1_xcmplx_0 X3) \wedge (\exists X4. \\
& (v1_xcmplx_0 X4) \wedge ((X0 = X3) \wedge ((X1 = X4) \wedge (X2 = k2_xcmplx_0 X3 X4)))))) \wedge \\
& (((((X0 = k1_xxreal_0) \wedge (X1 \neq k2_xxreal_0)) \vee ((X1 = k1_xxreal_0) \wedge \\
& (X0 \neq k2_xxreal_0))) \Rightarrow ((X2 = k1_xxreal_3 X0 X1) \Leftrightarrow (X2 = k1_xxreal_0))) \wedge \\
& (((((X0 = k2_xxreal_0) \wedge (X1 \neq k1_xxreal_0)) \vee ((X1 = k2_xxreal_0) \wedge \\
& (X0 \neq k1_xxreal_0))) \Rightarrow ((X2 = k1_xxreal_3 X0 X1) \Leftrightarrow (X2 = k2_xxreal_0))) \wedge \\
& (\neg(\neg(v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \wedge (\neg(X0 = k1_xxreal_0) \wedge \\
& (X1 \neq k2_xxreal_0)) \wedge (\neg(X1 = k1_xxreal_0) \wedge (X0 \neq k2_xxreal_0)) \wedge \\
& ((\neg(X0 = k2_xxreal_0) \wedge (X1 \neq k1_xxreal_0)) \wedge (\neg(X1 = k2_xxreal_0) \wedge \\
& (X0 \neq k1_xxreal_0))) \wedge (\neg(X2 = k1_xxreal_3 X0 X1) \Leftrightarrow (X2 = k6_numbers))))))))) \\
& \tag{6}
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\
& (v1_xxreal_0 X2) \Rightarrow (\neg(\neg(X0 = k1_xxreal_0) \wedge (X1 = k2_xxreal_0)) \wedge \\
& ((\neg(X0 = k2_xxreal_0) \wedge (X1 = k1_xxreal_0)) \wedge (\neg r1_xxreal_0 X2 (\\
& k1_xxreal_3 X0 X1)) \wedge (\neg(X0 \neq k1_xxreal_0) \wedge ((X1 \neq k1_xxreal_0) \wedge \\
& ((X2 \neq k2_xxreal_0) \wedge (\neg r1_xxreal_0 (k3_xxreal_3 X2 X1) X0)))))))))
\end{aligned}$$