t53_xxreal_3 (TMEhXQU5Ce7onT3qmRkprUkNWUT4CVpVZhy)

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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 $k3\_xxreal\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xxreal\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $k1\_numbers : \iota$ be given. Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow (r1\_xxreal\_0\ k2\_xxreal\_0\ X0) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow ((r1\_xxreal\_0\ k1\_xxreal\_0\ X0) \Rightarrow (X0 = k1\_xxreal\_0)) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow (\forall X2.(v1\_xxreal\_0\ X2) \Rightarrow ((r1\_xxreal\_0\ X0\ (k1\_xxreal\_3\ X2\ X1)) \Rightarrow (((X0 = k1\_xxreal\_0) \wedge ((X1 = k1\_xxreal\_0) \wedge (\neg r1\_xxreal\_0\ k6\_numbers\ X2))) \vee (((X0 = k2\_xxreal\_0) \wedge ((X1 = k2\_xxreal\_0) \wedge (\neg r1\_xxreal\_0\ k6\_numbers\ X2))) \vee (r1\_xxreal\_0\ (k3\_xxreal\_3\ X0\ X1)\ X2))))))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow (r1\_xxreal\_0\ X0\ k1\_xxreal\_0) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow ((X0 \neq k2\_xxreal\_0) \Rightarrow ((k3\_xxreal\_3\ k2\_xxreal\_0\ X0 = k2\_xxreal\_0) \wedge (k3\_xxreal\_3\ X0\ k2\_xxreal\_0 = k1\_xxreal\_0))) \tag{5}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow ((X0 \neq k1\_xxreal\_0) \Rightarrow ((k3\_xxreal\_3\ k1\_xxreal\_0\ X0 = k1\_xxreal\_0) \wedge (k3\_xxreal\_3\ X0\ k1\_xxreal\_0 = k2\_xxreal\_0))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0\ X0)\wedge(v1\_xxreal\_0\ X1))\Rightarrow(\\ v1\_xxreal\_0\ (k3\_xxreal\_3\ X0\ X1)) \tag{7}$$

Assume the following.

$$k1\_xxreal\_0 = k1\_numbers \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0\ X0)\wedge(v1\_xxreal\_0\ X1))\Rightarrow(\\ (r1\_xxreal\_0\ X0\ X1)\vee(r1\_xxreal\_0\ X1\ X0)) \tag{9}$$

Theorem 1

$$\forall X0.(v1\_xxreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xxreal\_0\ X1)\Rightarrow(\forall X2.\\ (v1\_xxreal\_0\ X2)\Rightarrow(\neg(\neg(X0 = k1\_xxreal\_0)\wedge(X1 = k1\_xxreal\_0))\wedge\\ ((\neg(X0 = k2\_xxreal\_0)\wedge(X1 = k2\_xxreal\_0))\wedge((\neg r1\_xxreal\_0\ (k3\_xxreal\_3\\ X0\ X1)\ X2)\wedge(\neg(X2\neq k1\_xxreal\_0)\wedge((X1\neq k1\_xxreal\_0)\wedge((X0\neq k2\_xxreal\_0)\wedge\\ (\neg r1\_xxreal\_0\ X0\ (k1\_xxreal\_3\ X2\ X1))))))))))$$