t57_xxreal_3 (TMRshY-BCh2ZMHz1scXXLL5MhZoUJYWBkUDx)

October 27, 2020

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

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

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow (\forall X2.(v1\_xxreal\_0\ X2) \Rightarrow (\neg(\neg(X0 = k1\_xxreal\_0) \wedge (X1 = k2\_xxreal\_0)) \wedge ((\neg(X0 = k2\_xxreal\_0) \wedge (X1 = k1\_xxreal\_0)) \wedge ((\neg r1\_xxreal\_0\ (k1\_xxreal\_3\ X0\ X1)\ X2) \wedge (\neg(X2 \neq k1\_xxreal\_0) \wedge ((X1 \neq k2\_xxreal\_0) \wedge ((X0 \neq k2\_xxreal\_0) \wedge (\neg r1\_xxreal\_0\ X0\ (k3\_xxreal\_3\ X2\ X1))))))))))) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow ((X0 \neq k1\_xxreal\_0) \Rightarrow ((k3\_xxreal\_3\ k1\_xxreal\_0\ X0 = k1\_xxreal\_0) \wedge (k3\_xxreal\_3\ X0\ k1\_xxreal\_0 = k2\_xxreal\_0))) \tag{3}$$

Theorem 1

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