t32_xxreal_2 (TMLyirqijSdv9gM2VcNwbPvZJPvVVCXKoF5)

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Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_xxreal\_2 : \iota \Rightarrow \iota$ be given. Let $k4\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_xxreal\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow (\forall X2.\ (v1\_xxreal\_0\ X2) \Rightarrow ((X0 \in k4\_xxreal\_1\ X1\ X2) \Leftrightarrow ((\neg r1\_xxreal\_0\ X0\ X1) \wedge (\neg r1\_xxreal\_0\ X2\ X0))))) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow (m1\_xxreal\_2\ X0\ (k4\_xxreal\_1\ X1\ X0))) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow (\forall X2.\ (v1\_xxreal\_0\ X2) \Rightarrow ((\forall X3.(v1\_xxreal\_0\ X3) \Rightarrow (\neg(\neg r1\_xxreal\_0\ X3\ X0) \wedge ((\neg r1\_xxreal\_0\ X1\ X3) \wedge (\neg r1\_xxreal\_0\ X3\ X2)))) \Rightarrow ((r1\_xxreal\_0\ X1\ X0) \vee (r1\_xxreal\_0\ X1\ X2))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0\ X0) \wedge (v1\_xxreal\_0\ X1)) \Rightarrow (v2\_membered\ (k4\_xxreal\_1\ X0\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(m1\_xxreal\_2\ X1\ X0) \Rightarrow (v1\_xxreal\_0\ X1)) \tag{5}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow ((X1 = k1\_xxreal\_2\ X0) \Leftrightarrow ((m1\_xxreal\_2\ X1\ X0) \wedge (\forall X2.(m1\_xxreal\_2\ X2\ X0) \Rightarrow (r1\_xxreal\_0\ X1\ X2))))) \tag{6}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow(\forall X1.(v1\_xxreal\_0\ X1)\Rightarrow((m1\_xxreal\_2\ X1\ X0)\Leftrightarrow(\forall X2.(v1\_xxreal\_0\ X2)\Rightarrow((X2\in X0)\Rightarrow(r1\_xxreal\_0\ X2\ X1))))) \tag{7}$$

Theorem 1

$$\forall X0.(v1\_xxreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xxreal\_0\ X1)\Rightarrow((\neg r1\_xxreal\_0\ X1\ X0)\Rightarrow(k1\_xxreal\_2\ (k4\_xxreal\_1\ X0\ X1) = X1)))$$