

t88_xxreal_2 (TMNQNgyp-
LoyQEspA2u3nsHHHhP2qipZAgH)

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Let $v2_membered : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_xxreal_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v2_membered X0) \Rightarrow & ((\forall X1.(v1_xxreal_0 X1) \Rightarrow (\\ & \forall X2.(v1_xxreal_0 X2) \Rightarrow (\forall X3.(v1_xxreal_0 X3) \Rightarrow ((\\ (X1 \in X0) \wedge (X2 \in X0) \Rightarrow & ((r1_xxreal_0 X3 X1) \vee ((r1_xxreal_0 X2 X3) \vee \\ & (X3 \in X0)))))) \Rightarrow (v6_xxreal_2 X0)) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (r1_xxreal_0 X0 X1) \vee (r1_xxreal_0 X1 X0) \tag{2}$$

Theorem 1

$$\begin{aligned} \forall X0.(v2_membered X0) \Rightarrow & ((\forall X1.(v1_xxreal_0 X1) \Rightarrow (\\ & \forall X2.(v1_xxreal_0 X2) \Rightarrow (\forall X3.(v1_xxreal_0 X3) \Rightarrow ((\\ (X1 \in X0) \wedge ((X2 \in X0) \wedge & ((r1_xxreal_0 X1 X3) \wedge (r1_xxreal_0 X3 X2)))) \Rightarrow \\ & (X3 \in X0)))))) \Rightarrow (v6_xxreal_2 X0) \end{aligned}$$