t43_seq_4 (TMTbSP9knqKNJUhfTcd5mB1KjDMSRfigs7s)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v3\_membered : \iota \Rightarrow o$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_seq\_4 : \iota \Rightarrow \iota$ be given. Let $v3\_xxreal\_2 : \iota \Rightarrow o$ be given. Let $k2\_xxreal\_2 : \iota \Rightarrow \iota$ be given. Let $v2\_membered : \iota \Rightarrow o$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $m2\_xxreal\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge ((v3\_membered\ X0) \wedge (v3\_xxreal\_2\ X0))) \Rightarrow (k3\_seq\_4\ X0 = k2\_xxreal\_2\ X0) \tag{1}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (v1\_xxreal\_0\ (k2\_xxreal\_2\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow ((v3\_xxreal\_2\ X0) \Leftrightarrow (\exists X1.(v1\_xreal\_0\ X1) \wedge (m2\_xxreal\_2\ X1\ X0))) \tag{3}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow ((X1 = k2\_xxreal\_2\ X0) \Leftrightarrow ((m2\_xxreal\_2\ X1\ X0) \wedge (\forall X2.(m2\_xxreal\_2\ X2\ X0) \Rightarrow (r1\_xxreal\_0\ X2\ X1)))))) \tag{4}$$

Assume the following.

$$\forall X0.(v3\_membered\ X0) \Leftrightarrow (\forall X1.(X1 \in X0) \Rightarrow (v1\_xreal\_0\ X1)) \tag{5}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow ((m2\_xxreal\_2\ X1\ X0) \Leftrightarrow (\forall X2.(v1\_xxreal\_0\ X2) \Rightarrow ((X2 \in X0) \Rightarrow (r1\_xxreal\_0\ X1\ X2))))) \tag{6}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (v1\_xxreal\_0\ X0) \tag{7}$$

Assume the following.

$$\forall X0.(v3\_membered\ X0) \Rightarrow (v2\_membered\ X0) \tag{8}$$

Theorem 1

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge (v3\_membered\ X0)) \Rightarrow (\forall X1.\ (v1\_xreal\_0\ X1) \Rightarrow ((\forall X2.(v1\_xreal\_0\ X2) \Rightarrow ((X2 \in X0) \Rightarrow (r1\_xxreal\_0\ X1\ X2))) \Rightarrow (r1\_xxreal\_0\ X1\ (k3\_seq\_4\ X0))))$$