

## t2\_chain\_1

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Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\exists X2. (v1\_xreal\_0 X2) \wedge ((\neg r1\_xxreal\_0 X2 X0) \wedge (\neg r1\_xxreal\_0 X2 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Leftrightarrow (X0 \in k1\_numbers) \quad (3)$$

### Theorem 1

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\exists X2. (m1\_subset\_1 X2 k1\_numbers) \wedge ((\neg r1\_xxreal\_0 X2 X0) \wedge (\neg r1\_xxreal\_0 X2 X1))))$$