

t18\_topgen\_5  
(TMT1irXbXm4z83TTAbQeHBkfpXGxVCN7Vfq)

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Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k19\_euclid : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_topgen\_5 : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (k10\_finseq\_1 X0 X1 \in k2\_topgen\_5) \Leftrightarrow ((X0 \in k1\_numbers) \wedge (\exists X2. (m1\_subset\_1 X2 k1\_numbers) \wedge ((X1 = X2) \wedge (r1\_xxreal\_0 k6\_numbers X2)))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xreal\_0 X0) \wedge (v1\_xreal\_0 X1)) \Rightarrow (k19\_euclid X0 X1 = k10\_finseq\_1 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0. (v1\_xreal\_0 X0) \Leftrightarrow (X0 \in k1\_numbers) \quad (4)$$

**Theorem 1**

$$\forall X0. (v1\_xreal\_0 X0) \Rightarrow (\forall X1. (v1\_xreal\_0 X1) \Rightarrow ((k19\_euclid X0 X1 \in k2\_topgen\_5) \Leftrightarrow (r1\_xxreal\_0 k6\_numbers X1)))$$