

# t27\_topreal1

(TMcAVdZbL24rEVAFBHFfznENV527Zj6iq2x)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k15\_euclid : \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $v5\_topreal1 : \iota \Rightarrow o$  be given. Let  $k1\_topreal1 : \iota$  be given. Let  $k4\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k19\_euclid : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_topreal1 : \iota \Rightarrow o$  be given. Let  $k3\_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \exists X0.(m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \wedge \\
& (\exists X1.(m2\_finseq\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2))) \wedge \\
& ((v4\_topreal1 X0) \wedge ((v4\_topreal1 X1) \wedge ((k1\_topreal1 = k4\_subset\_1 \\
& (u1\_struct\_0 (k15\_euclid np\_2)) (k3\_topreal1 np\_2 X0) (k3\_topreal1 \\
& np\_2 X1)) \wedge ((k9\_subset\_1 (u1\_struct\_0 (k15\_euclid np\_2)) (k3\_topreal1 \\
& np\_2 X0) (k3\_topreal1 np\_2 X1) = k2\_tarski (k19\_euclid k6\_numbers \\
& k6\_numbers) (k19\_euclid np\_1 np\_1)) \wedge ((k7\_partfun1 (u1\_struct\_0 \\
& (k15\_euclid np\_2)) X0 np\_1 = k19\_euclid k6\_numbers k6\_numbers) \wedge \\
& ((k7\_partfun1 (u1\_struct\_0 (k15\_euclid np\_2)) X0 (k3\_finseq\_1 \\
& X0) = k19\_euclid np\_1 np\_1) \wedge ((k7\_partfun1 (u1\_struct\_0 (k15\_euclid \\
& np\_2)) X1 np\_1 = k19\_euclid k6\_numbers k6\_numbers) \wedge (k7\_partfun1 \\
& (u1\_struct\_0 (k15\_euclid np\_2)) X1 (k3\_finseq\_1 X1) = k19\_euclid \\
& np\_1 np\_1)))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& ((v2\_xxreal\_0 np\_2) \wedge (m2\_subset\_1 np\_2 k1\_numbers k5\_numbers)) \wedge \\
& ((m1\_subset\_1 np\_2 k5\_numbers) \wedge (m1\_subset\_1 np\_2 k1\_numbers))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \tag{3}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (4)$$

Assume the following.

$$v6\_membered\ k4\_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(m1\_finseq\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ X0))))\Rightarrow(m1\_subset\_1\ (k3\_topreal1\ X0\ X1)\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ X0)))) \quad (6)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_2))))\Rightarrow((v5\_topreal1\ X0)\Leftrightarrow(\exists X1.(m2\_finseq\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ np\_2))))\wedge((v4\_topreal1\ X1)\wedge(X0 = k3\_topreal1\ np\_2\ X1)))) \quad (7)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_2))))\Rightarrow((v5\_topreal1\ X0)\Rightarrow(\neg v1\_xboole\_0\ X0)) \quad (8)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow(v7\_ordinal1\ X1)) \quad (9)$$

**Theorem 1**

$$\begin{aligned} & \exists X0.((\neg v1\_xboole\_0\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ ( \\ & \quad u1\_struct\_0\ (k15\_euclid\ np\_2))))))\wedge(\exists X1.((\neg v1\_xboole\_0 \\ & X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_2))))))\wedge \\ & ((v5\_topreal1\ X0)\wedge((v5\_topreal1\ X1)\wedge((k1\_topreal1 = k4\_subset\_1 \\ & \quad (u1\_struct\_0\ (k15\_euclid\ np\_2))\ X0\ X1)\wedge(k9\_subset\_1\ (u1\_struct\_0 \\ & (k15\_euclid\ np\_2))\ X0\ X1 = k2\_tarski\ (k19\_euclid\ k6\_numbers\ k6\_numbers) \\ & \quad (k19\_euclid\ np\_1\ np\_1)))))) \end{aligned}$$