

## t29\_borsuk\_5

(TMaReARCTD3jkGXCAXGMJVePjwPbK319mQ8)

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Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k2\_borsuk\_5 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_rat\_1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k4\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k3\_numbers : \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xxreal\_0 X2) \Rightarrow ((X0 \in k4\_xxreal\_1 X1 X2) \Leftrightarrow ((\neg r1\_xxreal\_0 X0 X1) \wedge \\ & (\neg r1\_xxreal\_0 X2 X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & X0)) \Rightarrow (k9\_subset\_1 X0 X1 X2 = k3\_xboole\_0 X1 X2) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow ( \\ & k2\_rcomp\_1 X0 X1 = k4\_xxreal\_1 X0 X1) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow ( \\ & m1\_subset\_1 (k2\_rcomp\_1 X0 X1) (k1\_zfmisc\_1 k1\_numbers)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(X2 = k3\_xboole\_0 X0 X1) \Leftrightarrow (\forall X3. \\ & (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.(v1\_rat\_1 X0) \Leftrightarrow (X0 \in k3\_numbers) \tag{6}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (k2\_borsuk\_5 X0 X1 = k9\_subset\_1 k1\_numbers k3\_numbers (k2\_rcomp\_1 X0 X1))) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xxreal\_0 X0) \quad (8)$$

**Theorem 1**

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2.(v1\_xxreal\_0 X2) \Rightarrow ((X2 \in k2\_borsuk\_5 X0 X1) \Leftrightarrow ((v1\_rat\_1 X2) \wedge ((\neg v1\_xxreal\_0 X2 X0) \wedge (\neg v1\_xxreal\_0 X1 X2)))))))$$