

t63\_borsuk\_5 (TMX-  
dUmegT4DxHyLSKpMqU9AqLkCoiqXKKAy)

October 27, 2020

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  $k3\_topmetr : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k1\_seq\_4 : \iota \Rightarrow \iota$  be given. Let  $k3\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xxreal\_0 : \iota$  be given. Let  $k3\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xxreal\_0 : \iota$  be given. Let  $k4\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k6\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k2\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. k4\_xboole\_0 (k4\_xboole\_0 X0 X1) X2 = k4\_xboole\_0 X0 (k2\_xboole\_0 X1 X2) \quad (1)$$

Assume the following.

$$\forall X0. (v1\_xxreal\_0 X0) \Rightarrow (\forall X1. (v1\_xxreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Rightarrow (k6\_subset\_1 (k4\_xxreal\_1 k2\_xxreal\_0 X1) (k1\_tarski X0) = k2\_xboole\_0 (k4\_xxreal\_1 k2\_xxreal\_0 X0) (k4\_xxreal\_1 X0 X1)))) \quad (2)$$

Assume the following.

$$\forall X0. (v1\_xxreal\_0 X0) \Rightarrow (\forall X1. (v1\_xxreal\_0 X1) \Rightarrow (k6\_subset\_1 (k4\_xxreal\_1 X0 k1\_xxreal\_0) (k2\_xxreal\_1 X1 k1\_xxreal\_0) = k4\_xxreal\_1 X0 X1)) \quad (3)$$

Assume the following.

$$k1\_numbers = k4\_xxreal\_1 k2\_xxreal\_0 k1\_xxreal\_0 \quad (4)$$

Assume the following.

$$u1\_struct\_0 k3\_topmetr = k1\_numbers \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k6\_subset\_1 X0 X1 = k4\_xboole\_0 X0 X1 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0))) \Rightarrow (k4\_subset\_1 X0 X1 X2 = k2\_xboole\_0 X1 X2) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow (k3\_rcomp\_1 X0 X1 = k2\_xxreal\_1 X0 X1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow (k2\_rcomp\_1 X0 X1 = k4\_xxreal\_1 X0 X1) \quad (9)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (k1\_seq\_4 X0 = k1\_tarski X0) \quad (10)$$

Assume the following.

$$v1\_xxreal\_0 k2\_xxreal\_0 \quad (11)$$

Assume the following.

$$v1\_xxreal\_0 k1\_xxreal\_0 \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow (m1\_subset\_1 (k3\_rcomp\_1 X0 X1) (k1\_zfmisc\_1 k1\_numbers)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow (m1\_subset\_1 (k2\_rcomp\_1 X0 X1) (k1\_zfmisc\_1 k1\_numbers)) \quad (14)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (m1\_subset\_1 (k1\_seq\_4 X0) (k1\_zfmisc\_1 k1\_numbers)) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (k3\_subset\_1 X0 X1 = k4\_xboole\_0 X0 X1) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.k2\_xboole\_0 X0 X1 = k2\_xboole\_0 X1 X0 \quad (17)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (v1\_xxreal\_0 X0) \quad (18)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 k3\_topmetr))) \Rightarrow \\ & \quad (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2.(v1\_xreal\_0 X2) \Rightarrow ((( \\ & \quad r1\_xxreal\_0 X1 X2) \wedge (X0 = k4\_subset\_1 k1\_numbers (k1\_seq\_4 X1) ( \\ & \quad k3\_rcomp\_1 X2 k1\_xxreal\_0))) \Rightarrow (k3\_subset\_1 (u1\_struct\_0 k3\_topmetr) \\ & \quad X0 = k4\_subset\_1 k1\_numbers (k2\_rcomp\_1 k2\_xxreal\_0 X1) (k2\_rcomp\_1 \\ & \quad X1 X2)))))) \end{aligned}$$