

t17_borsuk_5

(TMX2mR23Fp4bSsXDqwmwrgxB8W1Cz9tjATw)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v1_rat_1 : \iota \Rightarrow o$ be given. Let $k1_borsuk_5 : \iota$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_numbers : \iota$ be given. Let $k1_numbers : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. k6_subset_1 X0 X1 = k4_xboole_0 X0 X1 \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k4_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (\neg X3 \in X1))) \quad (2)$$

Assume the following.

$$\forall X0. (v1_rat_1 X0) \Leftrightarrow (X0 \in k3_numbers) \quad (3)$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Leftrightarrow (X0 \in k1_numbers) \quad (4)$$

Assume the following.

$$k1_borsuk_5 = k6_subset_1 k1_numbers k3_numbers \quad (5)$$

Theorem 1 $\forall X0. (v1_xreal_0 X0) \Rightarrow ((\neg v1_rat_1 X0) \Leftrightarrow (X0 \in k1_borsuk_5)).$