

t6_borsuk_5

(TMbLKaHvzcs9XsmoCjxbLUZuTNzw5o4mrTx)

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Let $r1_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r4_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & (r1_subset.1 (k1_enumset1 X0 X1 X2) (k1_enumset1 X3 X4 X5)) \Rightarrow ((X0 \neq \\ & X3) \wedge ((X0 \neq X4) \wedge ((X0 \neq X5) \wedge ((X1 \neq X3) \wedge ((X1 \neq X4) \wedge ((X1 \neq X5) \wedge ((X2 \neq X3) \wedge \\ & ((X2 \neq X4) \wedge (X2 \neq X5)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & (r4_zfmisc.1 X0 X1 X2 X3 X4 X5) \Leftrightarrow ((X0 \neq X1) \wedge ((X0 \neq X2) \wedge ((X0 \neq X3) \wedge ((\\ & X0 \neq X4) \wedge ((X0 \neq X5) \wedge ((X1 \neq X2) \wedge ((X1 \neq X3) \wedge ((X1 \neq X4) \wedge ((X1 \neq X5) \wedge ((X2 \neq \\ & X3) \wedge ((X2 \neq X4) \wedge ((X2 \neq X5) \wedge ((X3 \neq X4) \wedge ((X3 \neq X5) \wedge (X4 \neq X5)))))))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (r1_zfmisc.1 X0 X1 X2) \Leftrightarrow ((X0 \neq X1) \wedge ((X0 \neq X2) \wedge (X1 \neq X2))) \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & ((r1_zfmisc.1 X0 X1 X2) \wedge ((r1_zfmisc.1 X3 X4 X5) \wedge (r1_subset.1 (\\ & k1_enumset1 X0 X1 X2) (k1_enumset1 X3 X4 X5)))) \Rightarrow (r4_zfmisc.1 X0 \\ & X1 X2 X3 X4 X5) \end{aligned}$$