

## t37\_zfrefle1

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_classes2 : \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_ordinal1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_ordinal2 : \iota \Rightarrow o$  be given. Let  $v3\_ordinal2 : \iota \Rightarrow o$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k4\_ordinal4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_classes1 : \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $r2\_zfrefle1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r3\_zfrefle1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.(\neg v1\_xboole\_0 X1) \Rightarrow \\ ((r3\_zfrefle1 X0 X1) \Rightarrow (r2\_zfrefle1 X0 X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1\_xboole\_0 X0) \wedge (v1\_classes2 X0)) \Rightarrow (\neg (k4\_ordinal1 \in \\ X0) \wedge (\forall X1.((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (k2\_ordinal1 \\ X0) (k2\_ordinal1 X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ (k2\_ordinal1 X0) (k2\_ordinal1 X0)))))) \Rightarrow (\neg (v2\_ordinal2 X1) \wedge ( \\ (v3\_ordinal2 X1) \wedge (\forall X2.((v3\_ordinal1 X2) \wedge (m1\_subset\_1 \\ X2 X0)) \Rightarrow (\forall X3.(\neg v1\_xboole\_0 X3) \Rightarrow (((k4\_ordinal4 X0 X1 X2 = \\ X2) \wedge (X3 = k4\_classes1 X2)) \Rightarrow ((k1\_xboole\_0 = X2) \vee (r3\_zfrefle1 X3 \\ X0)))))))))) \end{aligned} \quad (2)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((\neg v1\_xboole\_0 X0) \wedge (v1\_classes2 X0)) \Rightarrow (\neg (k4\_ordinal1 \in \\ X0) \wedge (\forall X1.((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (k2\_ordinal1 \\ X0) (k2\_ordinal1 X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ (k2\_ordinal1 X0) (k2\_ordinal1 X0)))))) \Rightarrow (\neg (v2\_ordinal2 X1) \wedge ( \\ (v3\_ordinal2 X1) \wedge (\forall X2.((v3\_ordinal1 X2) \wedge (m1\_subset\_1 \\ X2 X0)) \Rightarrow (\forall X3.(\neg v1\_xboole\_0 X3) \Rightarrow (((k4\_ordinal4 X0 X1 X2 = \\ X2) \wedge (X3 = k4\_classes1 X2)) \Rightarrow ((k1\_xboole\_0 = X2) \vee (r2\_zfrefle1 X3 \\ X0)))))))))) \end{aligned}$$