

# t11\_zfrefle1 (TMMMyyn- bYKEa4AskGMSkZQupuhdgQXfzTNc3)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_classes2 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_classes1 : \iota \Rightarrow o$  be given. Let  $r2\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_classes1 : \iota \Rightarrow o$  be given. Let  $k9\_setfam\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_card\_1 : \iota \Rightarrow o$  be given. Let  $v2\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (r1\_ordinal1 (k1\_card\_1 (k7\_relat\_1 X1 X0)) (k1\_card\_1 X0)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_classes1 X0) \wedge (X1 \in X0)) \Rightarrow ((\neg r2\_tarski X1 X0) \wedge (k1\_card\_1 X1 \in k1\_card\_1 X0)) \quad (2)$$

Assume the following.

$$\forall X0. (v2\_classes1 X0) \Leftrightarrow ((v1\_classes1 X0) \wedge ((\forall X1. (X1 \in X0) \Rightarrow (k9\_setfam\_1 X1 \in X0)) \wedge (\forall X1. ((r1\_tarski X1 X0) \wedge (k1\_card\_1 X1 \in k1\_card\_1 X0)) \Rightarrow (X1 \in X0)))) \quad (3)$$

Assume the following.

$$\forall X0. (v1\_ordinal1 X0) \Rightarrow (\forall X1. (v3\_ordinal1 X1) \Rightarrow (\forall X2. (v3\_ordinal1 X2) \Rightarrow (((r1\_tarski X0 X1) \wedge (X1 \in X2)) \Rightarrow (X0 \in X2)))) \quad (4)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 X0) \Rightarrow (k7\_relat\_1 X0 (k9\_xtuple\_0 X0) = k10\_xtuple\_0 X0) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((v3\_ordinal1 X0) \wedge (v3\_ordinal1 X1)) \Rightarrow (r1\_ordinal1 X0 X1) \Leftrightarrow (r1\_tarski X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.v1\_card\_1 (k1\_card\_1 X0) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_classes2 X0) \Rightarrow ((v1\_ordinal1 X0) \wedge (v2\_classes1 X0)) \quad (8)$$

Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow ((v1\_ordinal1 X0) \wedge (v2\_ordinal1 X0)) \quad (9)$$

Assume the following.

$$\forall X0.(v1\_card\_1 X0) \Rightarrow (v3\_ordinal1 X0) \quad (10)$$

**Theorem 1**

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.((\neg v1\_xboole\_0 X1) \wedge (v1\_classes2 X1)) \Rightarrow (((k9\_xtuple\_0 X0 \in X1) \wedge (r1\_tarski (k10\_xtuple\_0 X0) X1)) \Rightarrow (k10\_xtuple\_0 X0 \in X1)))$$