

t41_classes2 (TMN-
Trw4E1tQt7SA8VBz6JFSTEvdt1hmEQNv)

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Let $v1_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k6_classes1 : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ 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 $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1. \neg(v1_ordinal1 X1) \wedge (X0 \in k6_classes1 X1) \wedge (\forall X2. \neg(X2 \in X1) \wedge (k6_classes1 X2 = X0))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (r1_ordinal1 (k1_card_1 X0) (k1_card_1 X1)) \Leftrightarrow (\exists X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \wedge ((k9_xtuple_0 X2 = X1) \wedge (r1_tarski X0 (k10_xtuple_0 X2)))) \quad (3)$$

Assume the following.

$$\forall X0 : \iota \Rightarrow \iota. \forall X1. \exists X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \wedge ((k9_xtuple_0 X2 = X1) \wedge (\forall X3. (X3 \in X1) \Rightarrow (k1_funct_1 X2 X3 = X0 X3))) \quad (4)$$

Assume the following.

$$\forall X0. v3_ordinal1 (k6_classes1 X0) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (6)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.(X1 = k10_xtuple_0 X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (\exists X3.(X3 \in k9_xtuple_0 X0) \wedge (X2 = k1_funct_1 X0 X3)))) \quad (7)$$

Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v3_ordinal1 X1)) \quad (8)$$

Theorem 1

$$\forall X0.(v1_ordinal1 X0) \Rightarrow (r1_ordinal1 (k1_card_1 (k6_classes1 X0)) (k1_card_1 X0))$$