

t11_mycielsk (TMWBNxJdhMkTCtAfJQBB- DxwFDymPSsQhdxV)

October 27, 2020

Let $v8_struct_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_dilworth : \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_dilworth : \iota \Rightarrow o$ be given. Let $v1_dilworth : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. (v7_ordinal1 X1) \Rightarrow ((r1_xreal_0 X0 X1) \Leftrightarrow (r1_ordinal1 X0 X1))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Rightarrow (r1_ordinal1 (k1_card_1 X0) (k1_card_1 X1)) \quad (3)$$

Assume the following.

$$\forall X0. (v1_finset_1 X0) \Rightarrow (k5_card_1 X0 = k1_card_1 X0) \quad (4)$$

Assume the following.

$$\forall X0. ((v8_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (v1_finset_1 (u1_struct_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow (l1_struct_0 X0) \quad (6)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (m1_subset_1 (k5_card_1 X0) k4_ordinal1) \quad (7)$$

Assume the following.

$$\forall X0.((v3_dilworth X0) \wedge (l1_orders_2 X0)) \Rightarrow (v7_ordinal1 (k1_dilworth X0)) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v3_dilworth X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (v7_ordinal1 X1) \Rightarrow ((X1 = k1_dilworth X0) \Leftrightarrow ((\exists X2.((v1_finset_1 \\ & X2) \wedge ((v1_dilworth X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))))) \wedge (k5_card_1 X2 = X1)) \wedge (\forall X2.((v1_finset_1 X2) \wedge (\\ & (v1_dilworth X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))))) \Rightarrow (r1_xxreal_0 (k5_card_1 X2) X1)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (10)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v8_struct_0 X0) \Rightarrow (v3_dilworth X0)) \quad (11)$$

Theorem 1

$$\forall X0.((v8_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (r1_xxreal_0 (k1_dilworth X0) (k5_card_1 (u1_struct_0 X0)))$$