

t12_mycielsk (TMbH-
bgCbVU3XT834SPbA8EEvuNdvSmyLuPi)

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Let $v8_struct_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_dilworth : \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v4_dilworth : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_dilworth : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (\forall X1.(v1_finset_1 X1) \Rightarrow ((r1_tarski X0 X1) \Rightarrow (r1_xxreal_0 (k5_card_1 X0) (k5_card_1 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.((v8_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (v1_finset_1 (u1_struct_0 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (l1_struct_0 X0) \quad (4)$$

Assume the following.

$$\forall X0.((v4_dilworth X0) \wedge (l1_orders_2 X0)) \Rightarrow (v7_ordinal1 (k2_dilworth X0)) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v4_dilworth X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (v7_ordinal1 X1) \Rightarrow ((X1 = k2_dilworth X0) \Leftrightarrow ((\exists X2.((v1_finset_1 \\ & X2) \wedge ((v2_dilworth X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))))) \wedge (k5_card_1 X2 = X1)) \wedge (\forall X2.((v1_finset_1 X2) \wedge (\\ & (v2_dilworth X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))))) \Rightarrow (r1_xxreal_0 (k5_card_1 X2) X1)))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v8_struct_0 X0) \Rightarrow (v4_dilworth X0)) \quad (7)$$

Theorem 1

$$\forall X0.((v8_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (r1_xxreal_0 \\ (k2_dilworth X0) (k5_card_1 (u1_struct_0 X0)))$$