

# t10\_dilworth (TMbgRTemVcHPGVFjh- WahksSZKvbZXWB1YM9)

October 27, 2020

Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $v1\_dilworth : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.((v1\_dilworth X1 X0) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 X1)) \Rightarrow ((v1\_dilworth X2 X0) \wedge (m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v1\_finset\_1 X1) \Rightarrow (\neg \\ & (r1\_xxreal\_0 X0 (k5\_card\_1 X1)) \wedge (\forall X2.((v1\_finset\_1 X2) \wedge \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 X1)) \Rightarrow (k5\_card\_1 X2 \neq X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \tag{3}$$

## Theorem 1

$$\begin{aligned} & \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.((v1\_finset\_1 X1) \wedge ( \\ & (v1\_dilworth X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0)))) \Rightarrow (\forall X2.(v7\_ordinal1 X2) \Rightarrow (\neg (r1\_xxreal\_0 X2 (k5\_card\_1 \\ & X1)) \wedge (\forall X3.((v1\_finset\_1 X3) \wedge ((v1\_dilworth X3 X0) \wedge (m1\_subset\_1 \\ & X3 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))) \Rightarrow (\neg (r1\_tarski X3 X1) \wedge (k5\_card\_1 \\ & X3 = X2))))) \end{aligned}$$