

# t2\_dilworth (TMGHsD- HgJ2PDVoYD9e9TmMcQjGqKRQDWX9U)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. r1\_tarski (k2\_xboole\_0 (k1\_zfmisc\_1 X0) \\ & (k1\_zfmisc\_1 X1)) (k1\_zfmisc\_1 (k2\_xboole\_0 X0 X1)) \end{aligned} \quad (1)$$

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.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X2)) \Rightarrow (r1\_tarski X0 X2) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((r1\_tarski X0 X1) \wedge \\ & (r1\_tarski X2 X3)) \Rightarrow (r1\_tarski (k2\_xboole\_0 X0 X2) (k2\_xboole\_0 \\ & X1 X3)) \end{aligned} \quad (4)$$

## Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k1\_zfmisc\_1 X0))) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & (k1\_zfmisc\_1 X1))) \Rightarrow (m1\_subset\_1 (k2\_xboole\_0 X2 X3) (k1\_zfmisc\_1 \\ & (k1\_zfmisc\_1 (k2\_xboole\_0 X0 X1)))))) \end{aligned}$$