

# t5\_pencil\_3 (TMYSwtrEYJYRi- AvuWQrkrGK4qEGB65zHHBW)

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Let  $v3\_pencil\_1 : \iota \Rightarrow o$  be given. Let  $v4\_pencil\_1 : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_pre\_topc : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow ((\forall X2. (m1\_subset\_1 X2 X0) \Rightarrow (X2 \in X1)) \Rightarrow (X0 = X1)) \quad (3)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow (m1\_subset\_1 (u1\_pre\_topc X0) (k1\_zfmisc\_1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \quad (4)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow ((v4\_pencil\_1 X0) \Leftrightarrow (m1\_subset\_1 (u1\_struct\_0 X0) (u1\_pre\_topc X0))) \quad (5)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow ((v3\_pencil\_1 X0) \Leftrightarrow (v1\_xboole\_0 (u1\_pre\_topc X0))) \quad (6)$$

## Theorem 1

$$\forall X0. ((\neg v3\_pencil\_1 X0) \wedge ((\neg v4\_pencil\_1 X0) \wedge (l1\_pre\_topc X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_pre\_topc X0)) \Rightarrow (\neg \forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (X2 \in X1)))$$