

# l10\_poset\_1

(TMZ4V2yj6pdcA9DsowvJMnuxasKwWKcmKeS)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v3\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v4\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v5\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v1\_poset\_1 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_orders\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_funct\_7 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1\_xboole\_0 X0) \wedge \\ & (((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1)))))) \wedge (m1\_subset\_1 X3 X0))) \Rightarrow (k3\_funct\_2 X0 \\ & X1 X2 X3 = k1\_funct\_1 X2 X3) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 X0 X0) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))))) \Rightarrow (\forall X2. \\ & (v7\_ordinal1 X2) \Rightarrow ((v1\_funct\_1 (k9\_funct\_7 X1 X2)) \wedge ((v1\_funct\_2 \\ & (k9\_funct\_7 X1 X2) X0 X0) \wedge (m1\_subset\_1 (k9\_funct\_7 X1 X2) (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X0)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \tag{3}$$

Assume the following.

$$\forall X0. (l1\_orders\_2 X0) \Rightarrow (l1\_struct\_0 X0) \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0 X0)\wedge \\
& (((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 X0 X1)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1 X0 X1))))))\wedge(m1\_subset\_1 X3 X0))\Rightarrow(m1\_subset\_1 ( \\
& k3\_funct\_2 X0 X1 X2 X3) X1)
\end{aligned} \tag{5}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.(v7\_ordinal1 X0)\Rightarrow(\forall X1.((\neg v2\_struct\_0 X1)\wedge \\
& ((v1\_orders\_2 X1)\wedge((v3\_orders\_2 X1)\wedge((v4\_orders\_2 X1)\wedge((v5\_orders\_2 \\
& X1)\wedge((v1\_poset\_1 X1)\wedge(l1\_orders\_2 X1))))))\Rightarrow(\forall X2.(m1\_subset\_1 \\
& X2 (u1\_struct\_0 X1))\Rightarrow(\forall X3.((v1\_funct\_1 X3)\wedge((v1\_funct\_2 \\
& X3 (u1\_struct\_0 X1) (u1\_struct\_0 X1))\wedge((v5\_orders\_3 X3 X1 X1)\wedge \\
& (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X1) (u1\_struct\_0 \\
& X1))))))\Rightarrow(m1\_subset\_1 (k1\_funct\_1 (k9\_funct\_7 X3 X0) X2) (u1\_struct\_0 \\
& X1))))))
\end{aligned}$$