

# t26\_latsubgr (TMKQHH- wQHbf91pHmESJtBajVQ3fgV77zgvm)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_group\_1 : \iota \Rightarrow o$  be given. Let  $v3\_group\_1 : \iota \Rightarrow o$  be given. Let  $l3\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $m1\_group\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k11\_group\_4 : \iota \Rightarrow \iota$  be given. Let  $r3\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_group\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u2\_algstr\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_realset1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_group\_2 X1 X0) \Rightarrow (\forall X2. \\ (m1\_group\_2 X2 X0) \Rightarrow ((r1\_tarski (u1\_struct\_0 X1) (u1\_struct\_0 \\ X2)) \Rightarrow (m1\_group\_2 X1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_group\_2 X1 X0) \Rightarrow (\forall X2. \\ (m1\_group\_2 X2 X0) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 ( \\ k11\_group\_4 X0))) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 ( \\ k11\_group\_4 X0))) \Rightarrow (((X3 = X1) \wedge (X4 = X2)) \Rightarrow ((r3\_lattices (k11\_group\_4 \\ X0) X3 X4) \Leftrightarrow (r1\_tarski (u1\_struct\_0 X1) (u1\_struct\_0 X2)))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge \\ ((v3\_group\_1 X0) \wedge (l3\_algstr\_0 X0)))) \wedge (m1\_group\_2 X1 X0)) \Rightarrow (\forall X2. \\ (m1\_group\_6 X2 X0 X1) \Leftrightarrow (m1\_group\_2 X2 X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge (l3\_algstr\_0 \\ X0))) \Rightarrow (\forall X1.(m1\_group\_2 X1 X0) \Rightarrow ((\neg v2\_struct\_0 X1) \wedge ((v2\_group\_1 \\ X1) \wedge (l3\_algstr\_0 X1)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge (l3\_algstr\_0 \\
& X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v2\_group\_1 X1) \wedge (l3\_algstr\_0 \\
& X1))) \Rightarrow ((m1\_group\_2 X1 X0) \Leftrightarrow ((r1\_tarski (u1\_struct\_0 X1) (u1\_struct\_0 \\
& X0)) \wedge (u2\_algstr\_0 X1 = k1\_realset1 (u2\_algstr\_0 X0) (u1\_struct\_0 \\
& X1))))))
\end{aligned} \tag{5}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\
& X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_group\_2 X1 X0) \Rightarrow (\forall X2. \\
& (m1\_group\_2 X2 X0) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 ( \\
& k11\_group\_4 X0))) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 ( \\
& k11\_group\_4 X0))) \Rightarrow (((X3 = X1) \wedge (X4 = X2)) \Rightarrow ((r3\_lattices (k11\_group\_4 \\
& X0) X3 X4) \Leftrightarrow (m1\_group\_6 X1 X0 X2))))))
\end{aligned}$$