

t32\_group\_6  
(TMQR5wJAEFFeEVgXKwRydUXJwLrdUjJNNZD)

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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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_group\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_group\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_group\_1 : \iota \Rightarrow \iota$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ & X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v2\_group\_1 \\ & X1) \wedge ((v3\_group\_1 X1) \wedge (l3\_algstr\_0 X1)))) \Rightarrow (\forall X2.((v1\_funct\_1 \\ & X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge ((v1\_group\_6 \\ & X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\ & X0) (u1\_struct\_0 X1)))))) \Rightarrow (k3\_funct\_2 (u1\_struct\_0 X0) (u1\_struct\_0 \\ & X1) X2 (k1\_group\_1 X0) = k1\_group\_1 X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \tag{2}$$

Assume the following.

$$\forall X0.(l3\_algstr\_0 X0) \Rightarrow (l1\_struct\_0 X0) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1\_xboole\_0 X0) \wedge \\ & (((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1)))))) \wedge (m1\_subset\_1 X3 X0))) \Rightarrow (m1\_subset\_1 ( \\ & k3\_funct\_2 X0 X1 X2 X3) X1) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0 X0)\wedge((v2\_group\_1 X0)\wedge((v3\_group\_1 X0)\wedge(l3\_algstr\_0 X0))))\wedge(m1\_subset\_1 X1 (u1\_struct\_0 X0)))\Rightarrow(m1\_subset\_1 (k2\_group\_1 X0 X1) (u1\_struct\_0 X0)) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0)\wedge(l3\_algstr\_0 X0))\Rightarrow(\forall X1. \\ ((\neg v2\_struct\_0 X1)\wedge(l3\_algstr\_0 X1))\Rightarrow(\forall X2.((v1\_funct\_1 \\ X2)\wedge((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1))\wedge(m1\_subset\_1 \\ X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1))))))\Rightarrow \\ ((v1\_group\_6 X2 X0 X1)\Leftrightarrow(\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\ X0))\Rightarrow(\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0))\Rightarrow(k3\_funct\_2 \\ (u1\_struct\_0 X0) (u1\_struct\_0 X1) X2 (k6\_algstr\_0 X0 X3 X4) = k6\_algstr\_0 \\ X1 (k3\_funct\_2 (u1\_struct\_0 X0) (u1\_struct\_0 X1) X2 X3) (k3\_funct\_2 \\ (u1\_struct\_0 X0) (u1\_struct\_0 X1) X2 X4)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0)\wedge((v2\_group\_1 X0)\wedge((v3\_group\_1 \\ X0)\wedge(l3\_algstr\_0 X0))))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ X0))\Rightarrow(\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0))\Rightarrow((X2 = k2\_group\_1 \\ X0 X1)\Leftrightarrow((k6\_algstr\_0 X0 X1 X2 = k1\_group\_1 X0)\wedge(k6\_algstr\_0 X0 X2 \\ X1 = k1\_group\_1 X0)))))) \end{aligned} \quad (7)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0)\wedge((v2\_group\_1 X0)\wedge((v3\_group\_1 \\ X0)\wedge(l3\_algstr\_0 X0))))\Rightarrow(\forall X1.((\neg v2\_struct\_0 X1)\wedge((v2\_group\_1 \\ X1)\wedge((v3\_group\_1 X1)\wedge(l3\_algstr\_0 X1))))\Rightarrow(\forall X2.(m1\_subset\_1 \\ X2 (u1\_struct\_0 X0))\Rightarrow(\forall X3.((v1\_funct\_1 X3)\wedge((v1\_funct\_2 \\ X3 (u1\_struct\_0 X0) (u1\_struct\_0 X1))\wedge((v1\_group\_6 X3 X0 X1)\wedge( \\ m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 \\ X1))))))\Rightarrow(k3\_funct\_2 (u1\_struct\_0 X0) (u1\_struct\_0 X1) X3 (k2\_group\_1 \\ X0 X2) = k2\_group\_1 X1 (k3\_funct\_2 (u1\_struct\_0 X0) (u1\_struct\_0 \\ X1) X3 X2)))))) \end{aligned}$$