# l44_rmod_3 (TMRBA-cot8hgomxLZNj1HSVF7ZZM163o2LCQ)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v3\_group\_1 : \iota \Rightarrow o$ be given. Let $v4\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v5\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v2\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v3\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v4\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v4\_vectsp\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_vectsp\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_rmod\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_rmod\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_rmod\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2\_vectsp\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u1\_algstr\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_vectsp\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_struct\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v3\_group\_1\ X0) \wedge ((v4\_vectsp\_1\ X0) \wedge ((v5\_vectsp\_1\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge (l6\_algstr\_0\ X0))))))))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v13\_algstr\_0\ X1) \wedge ((v2\_rlvect\_1\ X1) \wedge ((v3\_rlvect\_1\ X1) \wedge ((v4\_rlvect\_1\ X1) \wedge ((v4\_vectsp\_2\ X1\ X0) \wedge (l1\_vectsp\_2\ X1\ X0))))))) \Rightarrow (\forall X2.(m1\_rmod\_2\ X2\ X0\ X1) \Rightarrow (\forall X3.((v2\_vectsp\_2\ X3\ X0) \wedge (m1\_rmod\_2\ X3\ X0\ X1)) \Rightarrow ((m1\_rmod\_2\ X2\ X0\ X3) \Leftrightarrow (k1\_rmod\_3\ X0\ X1\ X2\ X3 = X3))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v3\_group\_1\ X0) \wedge ((v4\_vectsp\_1\ X0) \wedge ((v5\_vectsp\_1\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge (l6\_algstr\_0\ X0))))))))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v13\_algstr\_0\ X1) \wedge ((v2\_rlvect\_1\ X1) \wedge ((v3\_rlvect\_1\ X1) \wedge ((v4\_rlvect\_1\ X1) \wedge ((v4\_vectsp\_2\ X1\ X0) \wedge (l1\_vectsp\_2\ X1\ X0))))))) \Rightarrow (\forall X2.(m1\_rmod\_2\ X2\ X0\ X1) \Rightarrow (\forall X3.(m1\_rmod\_2\ X3\ X0\ X1) \Rightarrow ((m1\_rmod\_2\ X2\ X0\ (k1\_rmod\_3\ X0\ X1\ X2\ X3)) \wedge (m1\_rmod\_2\ X3\ X0\ (k1\_rmod\_3\ X0\ X1\ X2\ X3)))))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_2\ X1\ X0)\wedge(l1\_vectsp\_2\ X1\ X0)))))))\Rightarrow(\forall X2.(m1\_rmod\_2\ X2\ X0\ X1)\Rightarrow(\forall X3.(m1\_rmod\_2\ X3\ X0\ X1)\Rightarrow(\forall X4.(m1\_rmod\_2\ X4\ X0\ X1)\Rightarrow(k1\_rmod\_3\ X0\ X1\ X2\ (k1\_rmod\_3\ X0\ X1\ X3\ X4) = k1\_rmod\_3\ X0\ X1\ (k1\_rmod\_3\ X0\ X1\ X2\ X3)\ X4))))) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0)))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_2\ X1\ X0)\wedge(l1\_vectsp\_2\ X1\ X0)))))))\Rightarrow(\forall X2.(m1\_rmod\_2\ X2\ X0\ X1)\Rightarrow(\forall X3.(m1\_rmod\_2\ X3\ X0\ X1)\Rightarrow((r1\_tarski\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X3))\Rightarrow(m1\_rmod\_2\ X2\ X0\ X3))))) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0)))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_2\ X1\ X0)\wedge(l1\_vectsp\_2\ X1\ X0)))))))\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v13\_algstr\_0\ X2)\wedge((v2\_rlvect\_1\ X2)\wedge((v3\_rlvect\_1\ X2)\wedge((v4\_rlvect\_1\ X2)\wedge((v4\_vectsp\_2\ X2\ X0)\wedge(l1\_vectsp\_2\ X2\ X0)))))))\Rightarrow(\forall X3.((\neg v2\_struct\_0\ X3)\wedge((v13\_algstr\_0\ X3)\wedge((v2\_rlvect\_1\ X3)\wedge((v3\_rlvect\_1\ X3)\wedge((v4\_rlvect\_1\ X3)\wedge((v4\_vectsp\_2\ X3\ X0)\wedge(l1\_vectsp\_2\ X3\ X0)))))))\Rightarrow(((m1\_rmod\_2\ X1\ X0\ X2)\wedge(m1\_rmod\_2\ X2\ X0\ X3))\Rightarrow(m1\_rmod\_2\ X1\ X0\ X3))))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1\_tarski\ X0\ X1)\wedge(r1\_tarski\ X1\ X2))\Rightarrow(r1\_tarski\ X0\ X2) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_2\ X1\ X0)\wedge(l1\_vectsp\_2\ X1\ X0)))))))\Rightarrow(\forall X2.(m1\_rmod\_2\ X2\ X0\ X1)\Rightarrow(\forall X3.((v2\_vectsp\_2\ X3\ X0)\wedge(m1\_rmod\_2\ X3\ X0\ X1))\Rightarrow((r1\_tarski\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X3))\Rightarrow(k1\_rmod\_3\ X0\ X1\ X2\ X3 = X3))))) \tag{7}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_2\ X1\ X0)\wedge(l1\_vectsp\_2\ X1\ X0)))))))\Rightarrow(\forall X2.(m1\_rmod\_2\ X2\ X0\ X1)\Rightarrow(\forall X3.(m1\_rmod\_2\ X3\ X0\ X1)\Rightarrow(r1\_tarski\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ (k1\_rmod\_3\ X0\ X1\ X2\ X3)))))) \tag{8}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_2\ X1\ X0)\wedge(l1\_vectsp\_2\ X1\ X0)))))))\Rightarrow(\forall X2.(m1\_rmod\_2\ X2\ X0\ X1)\Rightarrow(\forall X3.(m1\_rmod\_2\ X3\ X0\ X1)\Rightarrow(k1\_rmod\_3\ X0\ X1\ X2\ X3 = k1\_rmod\_3\ X0\ X1\ X3\ X2)))) \tag{9}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_2\ X1\ X0)\wedge(l1\_vectsp\_2\ X1\ X0)))))))\Rightarrow(\forall X2.(m1\_rmod\_2\ X2\ X0\ X1)\Rightarrow(\forall X3.(m1\_rmod\_2\ X3\ X0\ X1)\Rightarrow(\forall X4.(m1\_rmod\_2\ X4\ X0\ X1)\Rightarrow(r1\_tarski\ (u1\_struct\_0\ (k1\_rmod\_3\ X0\ X1\ X2\ (k2\_rmod\_3\ X0\ X1\ X3\ X4)))\ (u1\_struct\_0\ (k2\_rmod\_3\ X0\ X1\ (k1\_rmod\_3\ X0\ X1\ X3\ X2)\ (k1\_rmod\_3\ X0\ X1\ X2\ X4)))))))) \tag{10}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_2\ X1\ X0)\wedge(l1\_vectsp\_2\ X1\ X0)))))))\Rightarrow(\forall X2.(m1\_rmod\_2\ X2\ X0\ X1)\Rightarrow(\forall X3.(m1\_rmod\_2\ X3\ X0\ X1)\Rightarrow(r1\_tarski\ (u1\_struct\_0\ (k2\_rmod\_3\ X0\ X1\ X2\ X3))\ (u1\_struct\_0\ X2))))) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\wedge((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_2\ X1\ X0)\wedge(l1\_vectsp\_2\ X1\ X0)))))))\Rightarrow(\forall X2.(m1\_rmod\_2\ X2\ X0\ X1)\Rightarrow((\neg v2\_struct\_0\ X2)\wedge((v13\_algstr\_0\ X2)\wedge((v2\_rlvect\_1\ X2)\wedge((v3\_rlvect\_1\ X2)\wedge((v4\_rlvect\_1\ X2)\wedge((v4\_vectsp\_2\ X2\ X0)\wedge(l1\_vectsp\_2\ X2\ X0))))))) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\wedge(((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_2\ X1\ X0)\wedge(l1\_vectsp\_2\ X1\ X0)))))))\wedge((m1\_rmod\_2\ X2\ X0\ X1)\wedge(m1\_rmod\_2\ X3\ X0\ X1))))\Rightarrow((v2\_vectsp\_2\ (k2\_rmod\_3\ X0\ X1\ X2\ X3)\ X0)\wedge(m1\_rmod\_2\ (k2\_rmod\_3\ X0\ X1\ X2\ X3)\ X0\ X1)) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\wedge(((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_2\ X1\ X0)\wedge(l1\_vectsp\_2\ X1\ X0)))))))\wedge((m1\_rmod\_2\ X2\ X0\ X1)\wedge(m1\_rmod\_2\ X3\ X0\ X1))))\Rightarrow((v2\_vectsp\_2\ (k1\_rmod\_3\ X0\ X1\ X2\ X3)\ X0)\wedge(m1\_rmod\_2\ (k1\_rmod\_3\ X0\ X1\ X2\ X3)\ X0\ X1)) \tag{14}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_2\ X1\ X0)\wedge(l1\_vectsp\_2\ X1\ X0)))))))\Rightarrow(\forall X2.(m1\_rmod\_2\ X2\ X0\ X1)\Rightarrow(\forall X3.(m1\_rmod\_2\ X3\ X0\ X1)\Rightarrow(\forall X4.((v2\_vectsp\_2\ X4\ X0)\wedge(m1\_rmod\_2\ X4\ X0\ X1))\Rightarrow((X4 = k2\_rmod\_3\ X0\ X1\ X2\ X3)\Leftrightarrow(u1\_struct\_0\ X4 = k3\_xboole\_0\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X3)))))))) \tag{15}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_2\ X1\ X0)\wedge(l1\_vectsp\_2\ X1\ X0)))))))\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v13\_algstr\_0\ X2)\wedge((v2\_rlvect\_1\ X2)\wedge((v3\_rlvect\_1\ X2)\wedge((v4\_rlvect\_1\ X2)\wedge((v4\_vectsp\_2\ X2\ X0)\wedge(l1\_vectsp\_2\ X2\ X0)))))))\Rightarrow((m1\_rmod\_2\ X2\ X0\ X1)\Leftrightarrow((r1\_tarski\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X1))\wedge((k4\_struct\_0\ X2 = k4\_struct\_0\ X1)\wedge((u1\_algstr\_0\ X2 = k5\_relat\_1\ (u1\_algstr\_0\ X1)\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X2)))\wedge(u1\_vectsp\_2\ X0\ X2 = k5\_relat\_1\ (u1\_vectsp\_2\ X0\ X1)\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X0)))))))) \tag{16}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_2\ X1\ X0)\wedge(l1\_vectsp\_2\ X1\ X0)))))))\Rightarrow(\forall X2.(m1\_rmod\_2\ X2\ X0\ X1)\Rightarrow(\forall X3.(m1\_rmod\_2\ X3\ X0\ X1)\Rightarrow(\forall X4.((v2\_vectsp\_2\ X4\ X0)\wedge(m1\_rmod\_2\ X4\ X0\ X1))\Rightarrow((X4 = k1\_rmod\_3\ X0\ X1\ X2\ X3)\Leftrightarrow(u1\_struct\_0\ X4 = ReplSep2\ (toset\ (\lambda X5 : \iota.m1\_subset\_1\ X5\ (u1\_struct\_0\ X1)))\ (\lambda X5 : \iota.toset\ (\lambda X6 : \iota.m1\_subset\_1\ X6\ (u1\_struct\_0\ X1)))\ (\lambda X5 : \iota.\lambda X6 : \iota.(r1\_struct\_0\ X2\ X5)\wedge(r1\_struct\_0\ X3\ X6))\ (\lambda X5 : \iota.\lambda X6 : \iota.k3\_rlvect\_1\ X1\ X5\ X6))))))) \tag{17}$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge((v4\_vectsp\_2\ X1\ X0)\wedge(l1\_vectsp\_2\ X1\ X0)))))))\Rightarrow(\forall X2.(m1\_rmod\_2\ X2\ X0\ X1)\Rightarrow(\forall X3.(m1\_rmod\_2\ X3\ X0\ X1)\Rightarrow(\forall X4.(m1\_rmod\_2\ X4\ X0\ X1)\Rightarrow((m1\_rmod\_2\ X2\ X0\ X3)\Rightarrow(u1\_struct\_0\ (k1\_rmod\_3\ X0\ X1\ X3\ (k2\_rmod\_3\ X0\ X1\ X2\ X4))=u1\_struct\_0\ (k2\_rmod\_3\ X0\ X1\ (k1\_rmod\_3\ X0\ X1\ X2\ X3)\ (k1\_rmod\_3\ X0\ X1\ X3\ X4))))))))$$