t29_robbins3 (TMFAbuPZ1DZaS8qvQ1tDq6UNsbt1sDHp7Sb)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v10\_lattices : \iota \Rightarrow o$ be given. Let $v10\_robbins1 : \iota \Rightarrow o$ be given. Let $v8\_robbins3 : \iota \Rightarrow o$ be given. Let $v9\_robbins3 : \iota \Rightarrow o$ be given. Let $l4\_robbins1 : \iota \Rightarrow o$ be given. Let $v10\_robbins3 : \iota \Rightarrow o$ be given. Let $m3\_robbins3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v12\_oposet\_1 : \iota \Rightarrow o$ be given. Let $l4\_robbins3 : \iota \Rightarrow o$ be given. Let $v6\_oposet\_1 : \iota \Rightarrow o$ be given. Let $l3\_robbins3 : \iota \Rightarrow o$ be given. Let $l2\_qmax\_1 : \iota \Rightarrow o$ be given. Let $l2\_robbins1 : \iota \Rightarrow o$ be given. Let $l3\_lattices : \iota \Rightarrow o$ be given. Let $v4\_lattices : \iota \Rightarrow o$ be given. Let $v5\_lattices : \iota \Rightarrow o$ be given. Let $v6\_lattices : \iota \Rightarrow o$ be given. Let $v7\_lattices : \iota \Rightarrow o$ be given. Let $v8\_lattices : \iota \Rightarrow o$ be given. Let $v9\_lattices : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l4\_robbins3\ X0)) \Rightarrow (((v8\_robbins3\ X0) \wedge ((v9\_robbins3\ X0) \wedge ((v10\_robbins1\ X0) \wedge ((v10\_lattices\ X0) \wedge (v10\_robbins3\ X0))))) \Rightarrow ((v12\_oposet\_1\ X0) \wedge (v6\_oposet\_1\ X0))) \tag{1}$$

Assume the following.

$$\forall X0.(l4\_robbins1\ X0) \Rightarrow (\forall X1.(m3\_robbins3\ X1\ X0) \Rightarrow (l4\_robbins3\ X1)) \tag{2}$$

Assume the following.

$$\forall X0.(l4\_robbins3\ X0) \Rightarrow ((l3\_robbins3\ X0) \wedge ((l4\_robbins1\ X0) \wedge (l2\_qmax\_1\ X0))) \tag{3}$$

Assume the following.

$$\forall X0.(l4\_robbins1\ X0) \Rightarrow ((l2\_robbins1\ X0) \wedge (l3\_lattices\ X0)) \tag{4}$$

Assume the following.

$$\forall X0.(l3\_lattices\ X0) \Rightarrow (((\neg v2\_struct\_0\ X0) \wedge ((v4\_lattices\ X0) \wedge ((v5\_lattices\ X0) \wedge ((v6\_lattices\ X0) \wedge ((v7\_lattices\ X0) \wedge ((v8\_lattices\ X0) \wedge (v9\_lattices\ X0))))))) \Rightarrow ((\neg v2\_struct\_0\ X0) \wedge (v10\_lattices\ X0))) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v10\_lattices\ X0)\wedge((v10\_robbins1\ X0)\wedge((v8\_robbins3\ X0)\wedge((v9\_robbins3\ X0)\wedge(l4\_robbins1\ X0))))))\Rightarrow(\forall X1.(m3\_robbins3\ X1\ X0)\Rightarrow(v10\_robbins1\ X1)) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v10\_lattices\ X0)\wedge((v10\_robbins1\ X0)\wedge((v8\_robbins3\ X0)\wedge((v9\_robbins3\ X0)\wedge(l4\_robbins1\ X0))))))\Rightarrow(\forall X1.(m3\_robbins3\ X1\ X0)\Rightarrow(v8\_robbins3\ X1)) \tag{7}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v9\_robbins3\ X0)\wedge(l4\_robbins1\ X0)))\Rightarrow(\forall X1.(m3\_robbins3\ X1\ X0)\Rightarrow(v9\_robbins3\ X1)) \tag{8}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v9\_lattices\ X0)\wedge(l4\_robbins1\ X0)))\Rightarrow(\forall X1.(m3\_robbins3\ X1\ X0)\Rightarrow(v9\_lattices\ X1)) \tag{9}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v8\_lattices\ X0)\wedge(l4\_robbins1\ X0)))\Rightarrow(\forall X1.(m3\_robbins3\ X1\ X0)\Rightarrow(v8\_lattices\ X1)) \tag{10}$$

Assume the following.

$$\forall X0.(l3\_lattices\ X0)\Rightarrow(((\neg v2\_struct\_0\ X0)\wedge(v10\_lattices\ X0))\Rightarrow((\neg v2\_struct\_0\ X0)\wedge((v4\_lattices\ X0)\wedge((v5\_lattices\ X0)\wedge((v6\_lattices\ X0)\wedge((v7\_lattices\ X0)\wedge((v8\_lattices\ X0)\wedge(v9\_lattices\ X0))))))))) \tag{11}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v4\_lattices\ X0)\wedge(l4\_robbins1\ X0)))\Rightarrow(\forall X1.(m3\_robbins3\ X1\ X0)\Rightarrow(v4\_lattices\ X1)) \tag{12}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v6\_lattices\ X0)\wedge(l4\_robbins1\ X0)))\Rightarrow(\forall X1.(m3\_robbins3\ X1\ X0)\Rightarrow(v6\_lattices\ X1)) \tag{13}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v5\_lattices\ X0)\wedge(l4\_robbins1\ X0)))\Rightarrow(\forall X1.(m3\_robbins3\ X1\ X0)\Rightarrow(v5\_lattices\ X1)) \tag{14}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v7\_lattices\ X0)\wedge(l4\_robbins1\ X0)))\Rightarrow(\forall X1.(m3\_robbins3\ X1\ X0)\Rightarrow(v7\_lattices\ X1)) \tag{15}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l4\_robbins1\ X0))\Rightarrow(\forall X1.\ (m3\_robbins3\ X1\ X0)\Rightarrow(\neg v2\_struct\_0\ X1)) \tag{16}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v10\_lattices\ X0)\wedge((v10\_robbins1\ X0)\wedge((v8\_robbins3\ X0)\wedge((v9\_robbins3\ X0)\wedge(l4\_robbins1\ X0))))))\Rightarrow(\forall X1.((v10\_robbins3\ X1)\wedge(m3\_robbins3\ X1\ X0))\Rightarrow(v12\_oposet\_1\ X1))$$