t8_graphsp (TMbD-sCJYQq2MKw54GN2sZpkiBbMWp4b1n5D)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_graph\_1 : \iota \Rightarrow o$ be given. Let $v7\_graph\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_graph\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $r8\_graph\_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $r2\_graph\_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10\_graph\_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_graph\_1\ X0)) \Rightarrow (\forall X1.((v7\_graph\_1\ X1\ X0) \wedge (m2\_graph\_1\ X1\ X0)) \Rightarrow (\forall X2.\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow ((r2\_graph\_5\ X0\ X3\ X4\ X1\ X2) \Leftrightarrow (r2\_graph\_5\ X0\ X3\ X4\ X1\ (k2\_xboole\_0\ X2\ (k1\_tarski\ X4)))))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_graph\_1\ X0)) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.((v7\_graph\_1\ X3\ X0) \wedge (m2\_graph\_1\ X3\ X0)) \Rightarrow (\forall X4.\forall X5.((v1\_relat\_1\ X5) \wedge (v1\_funct\_1\ X5)) \Rightarrow ((r8\_graph\_5\ X0\ X1\ X2\ X3\ X4\ X5) \Leftrightarrow ((r2\_graph\_5\ X0\ X1\ X2\ X3\ X4) \wedge (\forall X6.((v7\_graph\_1\ X6\ X0) \wedge (m2\_graph\_1\ X6\ X0)) \Rightarrow ((r2\_graph\_5\ X0\ X1\ X2\ X6\ X4) \Rightarrow (r1\_xxreal\_0\ (k10\_graph\_5\ X0\ X3\ X5)\ (k10\_graph\_5\ X0\ X6\ X5)))))))))) \tag{2}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_graph\_1\ X0)) \Rightarrow (\forall X1.((v7\_graph\_1\ X1\ X0) \wedge (m2\_graph\_1\ X1\ X0)) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow (\forall X3.\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0)) \Rightarrow ((r8\_graph\_5\ X0\ X4\ X5\ X1\ X3\ X2) \Leftrightarrow (r8\_graph\_5\ X0\ X4\ X5\ X1\ (k2\_xboole\_0\ X3\ (k1\_tarski\ X5))\ X2))))))$$