t45_helly (TM-NQU9rtwNrnUb574aYbXYUrH51QPhYJ7Sz)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $v1\_glib\_000 : \iota \Rightarrow o$ be given. Let $v3\_glib\_002 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_glib\_000 : \iota \Rightarrow \iota$ be given. Let $k3\_helly : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge ((v1\_glib\_000\ X0) \wedge (v3\_glib\_002\ X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k6\_glib\_000\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k6\_glib\_000\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k6\_glib\_000\ X0)) \Rightarrow (k3\_helly\ X0\ X1\ X2\ X3 = k3\_helly\ X0\ X2\ X1\ X3)))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge ((v1\_glib\_000\ X0) \wedge (v3\_glib\_002\ X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k6\_glib\_000\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k6\_glib\_000\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k6\_glib\_000\ X0)) \Rightarrow (k3\_helly\ X0\ X1\ X2\ X3 = k3\_helly\ X0\ X1\ X3\ X2)))) \tag{2}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge ((v1\_glib\_000\ X0) \wedge (v3\_glib\_002\ X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k6\_glib\_000\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k6\_glib\_000\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k6\_glib\_000\ X0)) \Rightarrow (k3\_helly\ X0\ X1\ X2\ X3 = k3\_helly\ X0\ X3\ X2\ X1))))$$