t14_substlat (TMQba85gtdvJJFDqXWYKbgC8dcGdiW1htK3)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_finsub\_1 : \iota \Rightarrow \iota$ be given. Let $k4\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_substlat : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0 : \iota \Rightarrow \iota \Rightarrow \iota . \forall X1 : \iota \Rightarrow \iota \Rightarrow o . \forall X2 : \iota \Rightarrow \iota \Rightarrow o . \forall X3 . \forall X4 . (\forall X5 . (m1\_subset\_1\ X5\ X4) \Rightarrow (\forall X6 . (m1\_subset\_1\ X6\ X3) \Rightarrow ((X2\ X5\ X6) \Rightarrow (X1\ X5\ X6)))) \Rightarrow (r1\_tarski\ (ReplSep2\ (toset\ (\lambda X5 : \iota . m1\_subset\_1\ X5\ X4))\ (\lambda X5 : \iota . toset\ (\lambda X6 : \iota . m1\_subset\_1\ X6\ X3))\ (\lambda X5 : \iota . \lambda X6 : \iota . X2\ X5\ X6)\ (\lambda X5 : \iota . \lambda X6 : \iota . X0\ X5\ X6))\ (ReplSep2\ (toset\ (\lambda X5 : \iota . m1\_subset\_1\ X5\ X4))\ (\lambda X5 : \iota . toset\ (\lambda X6 : \iota . m1\_subset\_1\ X6\ X3))\ (\lambda X5 : \iota . \lambda X6 : \iota . X1\ X5\ X6)\ (\lambda X5 : \iota . \lambda X6 : \iota . X0\ X5\ X6))) \tag{1}$$

Assume the following.

$$\forall X0 . \forall X1 . (r1\_tarski\ X0\ X1) \Leftrightarrow (\forall X2 . (X2 \in X0) \Rightarrow (X2 \in X1)) \tag{2}$$

Assume the following.

$$\forall X0 . \forall X1 . \forall X2 . (m1\_subset\_1\ X2\ (k5\_finsub\_1\ (k4\_partfun1\ X0\ X1))) \Rightarrow (\forall X3 . (m1\_subset\_1\ X3\ (k5\_finsub\_1\ (k4\_partfun1\ X0\ X1))) \Rightarrow (k4\_substlat\ X0\ X1\ X2\ X3 = ReplSep2\ (toset\ (\lambda X4 : \iota . m1\_subset\_1\ X4\ (k4\_partfun1\ X0\ X1)))\ (\lambda X4 : \iota . toset\ (\lambda X5 : \iota . m1\_subset\_1\ X5\ (k4\_partfun1\ X0\ X1)))\ (\lambda X4 : \iota . \lambda X5 : \iota . (X4 \in X2) \wedge ((X5 \in X3) \wedge (r1\_partfun1\ X4\ X5)))\ (\lambda X4 : \iota . \lambda X5 : \iota . k2\_xboole\_0\ X4\ X5))) \tag{3}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k5\_finsub\_1\ (k4\_partfun1\ X0\ X1)))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k5\_finsub\_1\ (k4\_partfun1\ X0\ X1)))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (k5\_finsub\_1\ (k4\_partfun1\ X0\ X1)))\Rightarrow((r1\_tarski\ X2\ X3)\Rightarrow(r1\_tarski\ (k4\_substlat\ X0\ X1\ X2\ X4)\ (k4\_substlat\ X0\ X1\ X3\ X4)))))$$