

t118_funct_4 (TMKbLsLCHvM- rth8qoP6EJwyw6A1YF9nrmuy)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r1_xboole_0 (k9_xtuple_0 \\ X0) (k9_xtuple_0 X1)) \Rightarrow (k1_funct_4 X0 X1 = k1_funct_4 X1 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge \\ (v1_funct_1 X2)) \Rightarrow (k1_funct_4 (k1_funct_4 X0 X1) X2 = k1_funct_4 \\ X0 (k1_funct_4 X1 X2)))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge \\ (v1_funct_1 X2)) \Rightarrow ((r1_xboole_0 (k9_xtuple_0 X0) (k9_xtuple_0 \\ X1)) \Rightarrow (k1_funct_4 (k1_funct_4 X2 X0) X1 = k1_funct_4 (k1_funct_4 \\ X2 X1) X0)))) \end{aligned}$$