

t81_classes1
(TMc6A31WkgwyPhwZXiqqq6MR1Tg3CGnmvSQ)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $r2_classes1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r2_classes1 X0 X1) \Leftrightarrow (\exists X2. \\ ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \wedge ((k9_xtuple_0 X2 = k9_xtuple_0 \\ X0) \wedge ((k10_xtuple_0 X2 = k9_xtuple_0 X1) \wedge ((v2_funct_1 X2) \wedge (X0 = \\ k3_relat_1 X2 X1))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v2_funct_1 X0) \Rightarrow \\ (k1_card_1 (k9_xtuple_0 X0) = k1_card_1 (k10_xtuple_0 X0))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r2_classes1 X0 X1) \Rightarrow (k1_card_1 \\ (k9_xtuple_0 X0) = k1_card_1 (k9_xtuple_0 X1)))) \end{aligned}$$