

# t1\_partfun3

(TMEnc2eYbN55FGc1q4k17nRPFxesTHHUcbP)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_funct\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow ((v2\_funct\_1 X1) \Rightarrow (k8\_relat\_1 X1 X0 = k7\_relat\_1 (k2\_funct\_1 X1) X0)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow ((r1\_tarski X0 (k10\_xtuple\_0 X1)) \Rightarrow (k7\_relat\_1 X1 (k8\_relat\_1 X1 X0) = X0)) \quad (2)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v2\_funct\_1 X0) \Rightarrow ((k10\_xtuple\_0 X0 = k9\_xtuple\_0 (k2\_funct\_1 X0)) \wedge (k9\_xtuple\_0 X0 = k10\_xtuple\_0 (k2\_funct\_1 X0)))) \quad (3)$$

**Theorem 1**

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. ((v2\_funct\_1 X0) \wedge (r1\_tarski X1 (k9\_xtuple\_0 (k2\_funct\_1 X0)))) \Rightarrow (k7\_relat\_1 X0 (k7\_relat\_1 (k2\_funct\_1 X0) X1) = X1))$$