

# t76\_funct\_4 (TMMWxqLh- hcPW2eEfiohKL1aLudo1d8K1WhT)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2.(r1\_xboole\_0 (k9\_xtuple\_0 X0) X2) \Rightarrow (k5\_relat\_1 (k1\_funct\_4 X0 X1) X2 = k5\_relat\_1 X1 X2))) \quad (1)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2.(r1\_xboole\_0 X2 (k9\_xtuple\_0 X1)) \Rightarrow (k5\_relat\_1 (k1\_funct\_4 X0 X1) X2 = k5\_relat\_1 X0 X2))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow ((r1\_tarski (k9\_xtuple\_0 X1) X0) \Rightarrow (k5\_relat\_1 X1 X0 = X1)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((r1\_tarski X0 X1) \wedge ((r1\_tarski X2 X3) \wedge (r1\_xboole\_0 X1 X3))) \Rightarrow (r1\_xboole\_0 X0 X2) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. r1\_tarski X0 X0 \quad (5)$$

## Theorem 1

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2. \forall X3. ((r1\_tarski (k9\_xtuple\_0 X0) X2) \wedge ((r1\_tarski (k9\_xtuple\_0 X1) X3) \wedge (r1\_xboole\_0 X2 X3))) \Rightarrow ((k5\_relat\_1 (k1\_funct\_4 X0 X1) X2 = X0) \wedge (k5\_relat\_1 (k1\_funct\_4 X0 X1) X3 = X1))))))$$