

## t135\_funct\_7

(TML7syaNqEcLKoF1CsBpFuxLBTbW2cAsWaa)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_funct\_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_xboole\_0 X0 X2)) \Rightarrow (r1\_tarski X0 (k4\_xboole\_0 X1 X2)) \quad (1)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 X0) \Rightarrow (\forall X1. (v1\_relat\_1 X1) \Rightarrow (\forall X2. \forall X3. ((r1\_tarski X2 X3) \wedge (k5\_relat\_1 X0 X3 = k5\_relat\_1 X1 X3)) \Rightarrow (k5\_relat\_1 X0 X2 = k5\_relat\_1 X1 X2))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_xboole\_0 X0 X1) \Rightarrow (r1\_xboole\_0 X1 X0) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. k6\_subset\_1 X0 X1 = k4\_xboole\_0 X0 X1 \quad (4)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2. (r1\_funct\_7 X0 X1 X2) \Leftrightarrow (k5\_relat\_1 X0 (k6\_subset\_1 (k9\_xtuple\_0 X0) X2) = k5\_relat\_1 X1 (k6\_subset\_1 (k9\_xtuple\_0 X1) X2)))) \quad (5)$$

### Theorem 1

$$\forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow (\forall X3. ((v1\_relat\_1 X3) \wedge (v1\_funct\_1 X3)) \Rightarrow (((k9\_xtuple\_0 X2 = k9\_xtuple\_0 X3) \wedge ((r1\_tarski X0 (k9\_xtuple\_0 X2)) \wedge ((r1\_xboole\_0 X1 X0) \wedge (r1\_funct\_7 X2 X3 X1)))) \Rightarrow (k5\_relat\_1 X2 X0 = k5\_relat\_1 X3 X0)))$$