

t8_pnproc_1
(TMcSJZfd66AUwqCxxFfBgGugdVuD7VvFzcG)

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Let $v1_relat_1 : \iota \Rightarrow o$ 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 $k1_xboole_0 : \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow ((k5_relat_1 X1 X0 = k1_xboole_0) \Leftrightarrow (r1_xboole_0 (k9_xtuple_0 X1) X0)) \quad (1)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. (v1_relat_1 X1) \Rightarrow ((r1_xboole_0 (k9_xtuple_0 X0) (k9_xtuple_0 X1)) \Rightarrow (r1_xboole_0 X0 X1))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1_relat_1 X2) \Rightarrow ((r1_xboole_0 X0 X1) \Rightarrow (k5_relat_1 (k5_relat_1 X2 X0) X1 = k1_xboole_0)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (r1_xboole_0 X0 X1) \Rightarrow (r1_xboole_0 X1 X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X0) \Rightarrow (v1_relat_1 (k5_relat_1 X0 X1)) \quad (5)$$

Theorem 1

$$\forall X0. \forall X1. \forall X2. (v1_relat_1 X2) \Rightarrow (\forall X3. (v1_relat_1 X3) \Rightarrow ((r1_xboole_0 X0 X1) \Rightarrow (r1_xboole_0 (k5_relat_1 X2 X0) (k5_relat_1 X3 X1))))$$