

t22_pre_circ (TMPqtS- gVdGFZc1wgUS1yuagXVAwHyE3wpu8)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (\forall X1.(v1_finset_1 X1) \Rightarrow ((r1_xboole_0 X0 X1) \Rightarrow (k5_card_1 (k2_xboole_0 X0 X1) = k2_nat_1 (k5_card_1 X0) (k5_card_1 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r1_xboole_0 (k9_xtuple_0 X0) (k9_xtuple_0 X1)) \Rightarrow (k2_xboole_0 X0 X1 = k1_funct_4 X0 X1))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(v1_relat_1 X1) \Rightarrow ((r1_xboole_0 (k9_xtuple_0 X0) (k9_xtuple_0 X1)) \Rightarrow (r1_xboole_0 X0 X1))) \quad (3)$$

Theorem 1

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finset_1 X1))) \Rightarrow ((r1_xboole_0 (k9_xtuple_0 X0) (k9_xtuple_0 X1)) \Rightarrow (k5_card_1 (k1_funct_4 X0 X1) = k2_nat_1 (k5_card_1 X0) (k5_card_1 X1))))$$