

l27_heyting3 (TMd- nrQLW7N61x3y9uSVMHpQbk44NGz6RuiV)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_heyting3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $r2_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 X1 k5_numbers) \Rightarrow (r2_xboole_0 (k3_heyting3 X0 X1) (k3_heyting3 (k2_nat_1 X0 np_1) X1))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(r2_xboole_0 X0 X1) \Leftrightarrow ((r1_tarski X0 X1) \wedge (X0 \neq X1)) \quad (2)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 X1 k5_numbers) \Rightarrow (r1_tarski (k3_heyting3 X0 X1) (k3_heyting3 (k2_nat_1 X0 np_1) X1)))$$