

t15_euclid_7

(TMVumbJ689jyRsx9d5oDVq8zgz84xWDAqihP)

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Let $v1_euclid_7 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $r1_rvsum_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k23_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_euclid_7 X0) \Leftrightarrow (\forall X1.((v1_relat_1 X1) \wedge ((\\ & \quad v1_funct_1 X1) \wedge ((v1_finseq_1 X1) \wedge (v3_valued_0 X1)))) \Rightarrow (\forall X2. \\ & \quad ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge ((v1_finseq_1 X2) \wedge (v3_valued_0 \\ & \quad X2)))) \Rightarrow (((X1 \in X0) \wedge (X2 \in X0)) \Rightarrow ((X1 = X2) \vee (k23_rvsum_1 X1 X2 = k6_numbers)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v3_valued_0 \\ & \quad X0) \wedge (v1_finseq_1 X0)))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 \\ & \quad X1) \wedge ((v3_valued_0 X1) \wedge (v1_finseq_1 X1)))) \Rightarrow ((r1_rvsum_1 X0 X1) \Leftrightarrow \\ & \quad (k23_rvsum_1 X0 X1 = k6_numbers))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_euclid_7 X0) \Leftrightarrow (\forall X1.((v1_relat_1 X1) \wedge ((\\ & \quad v1_funct_1 X1) \wedge ((v1_finseq_1 X1) \wedge (v3_valued_0 X1)))) \Rightarrow (\forall X2. \\ & \quad ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge ((v1_finseq_1 X2) \wedge (v3_valued_0 \\ & \quad X2)))) \Rightarrow (((X1 \in X0) \wedge (X2 \in X0)) \Rightarrow ((X1 = X2) \vee (r1_rvsum_1 X1 X2)))))) \end{aligned}$$