

t6_euclid

(TMN5wHeU8FjK7NChCANUSxEwySZ5azpevNQ)

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Let $v1_xreal_0 : \iota \Rightarrow o$ 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 $k3_euclid : \iota \Rightarrow \iota$ be given. Let $k10_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_complex1 : \iota \Rightarrow \iota$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k54_valued_1 : \iota \Rightarrow \iota$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_complex1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow \\ (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k54_valued_1 (k24_valued_1 X0 X1) = k24_valued_1 (k54_valued_1 X0) (k18_complex1 X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v1_finseq_1 X0) \wedge (v3_valued_0 X0)))) \Rightarrow (k3_euclid X0 = k54_valued_1 X0) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k18_complex1 X0 = k16_complex1 X0) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1.(((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v3_valued_0 X0) \wedge (v1_finseq_1 X0)))) \wedge (v1_xreal_0 X1)) \Rightarrow (k10_rvsum_1 X0 X1 = k24_valued_1 X0 X1) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1.(((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v1_valued_0 X0) \wedge (v1_finseq_1 X0)))) \wedge (v1_xcmplx_0 X1)) \Rightarrow ((v1_relat_1 (k24_valued_1 X0 X1)) \wedge ((v1_funct_1 (k24_valued_1 X0 X1)) \wedge (v1_finseq_1 (k24_valued_1 X0 X1)))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v3_valued_0 X0))\wedge(v1_xreal_0 X1))\Rightarrow((v1_relat_1 (k24_valued_1 X0 X1))\wedge(v1_funct_1 (k24_valued_1 X0 X1))\wedge(v3_valued_0 (k24_valued_1 X0 X1)))) \quad (6)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v1_valued_0 X0)\wedge(v1_finseq_1 X0))))\Rightarrow((v1_relat_1 (k54_valued_1 X0))\wedge(v1_funct_1 (k54_valued_1 X0))\wedge((v3_valued_0 (k54_valued_1 X0))\wedge(v1_finseq_1 (k54_valued_1 X0)))) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0)\Rightarrow(v1_xreal_0 (k16_complex1 X0)) \quad (8)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v3_valued_0 X0))\Rightarrow((v1_relat_1 X0)\wedge(v1_valued_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xcmplx_0 X0) \quad (10)$$

Theorem 1

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge((v1_finseq_1 X1)\wedge(v3_valued_0 X1))))\Rightarrow(k3_euclid (k10_rvsum_1 X1 X0) = k10_rvsum_1 (k3_euclid X1) (k18_complex1 X0)))$$