t117_rvsum_1 (TMcQkwd-mVk88ubjhQbEAY9K6i2Uu6PuadYC)

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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 $v3\_valued\_0 : \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k10\_rvsum\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k24\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_valued\_0 : \iota \Rightarrow o$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finseq\_1\ X1))) \Rightarrow ((k3\_finseq\_1\ X0 = k3\_finseq\_1\ X1) \Leftrightarrow (k1\_relset\_1\ k5\_numbers\ X0 = k1\_relset\_1\ k5\_numbers\ X1))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v4\_relat\_1\ X1\ X0)) \Rightarrow (k1\_relset\_1\ X0\ X1 = k9\_xtuple\_0\ X1) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge ((v3\_valued\_0\ X0) \wedge (v1\_finseq\_1\ X0)))) \wedge (v1\_xreal\_0\ X1)) \Rightarrow (k10\_rvsum\_1\ X0\ X1 = k24\_valued\_1\ X0\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_valued\_0\ X0) \wedge (v1\_finseq\_1\ X0)))) \wedge (v1\_xcmplx\_0\ X1)) \Rightarrow ((v1\_relat\_1\ (k24\_valued\_1\ X0\ X1)) \wedge ((v1\_funct\_1\ (k24\_valued\_1\ X0\ X1)) \wedge (v1\_finseq\_1\ (k24\_valued\_1\ X0\ X1)))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v3\_valued\_0\ X0)))\wedge(v1\_xreal\_0\ X1))\Rightarrow((v1\_relat\_1\ (k24\_valued\_1\ X0\ X1))\wedge((v1\_funct\_1\ (k24\_valued\_1\ X0\ X1))\wedge(v3\_valued\_0\ (k24\_valued\_1\ X0\ X1)))) \tag{5}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_valued\_0\ X0)))\Rightarrow(\forall X1.(v1\_xcmplx\_0\ X1)\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge(v1\_funct\_1\ X2))\Rightarrow((X2 = k24\_valued\_1\ X0\ X1)\Leftrightarrow((k9\_xtuple\_0\ X2 = k9\_xtuple\_0\ X0)\wedge(\forall X3.(X3 \in k9\_xtuple\_0\ X2)\Rightarrow(k1\_funct\_1\ X2\ X3 = k3\_xcmplx\_0\ X1\ (k1\_funct\_1\ X0\ X3))))))) \tag{6}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v3\_valued\_0\ X0))\Rightarrow((v1\_relat\_1\ X0)\wedge(v1\_valued\_0\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))) \tag{8}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xcmplx\_0\ X0) \tag{9}$$

Theorem 1

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge((v3\_valued\_0\ X1)\wedge(v1\_finseq\_1\ X1))))\Rightarrow(k3\_finseq\_1\ (k10\_rvsum\_1\ X1\ X0) = k3\_finseq\_1\ X1))$$