

## t16\_valued\_2

(TMEjD984qZcRWyUSoF9SpMUHZq94TdXg4jV)

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Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k24\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_valued\_0 X0))) \Rightarrow \\ & (\forall X1.(v1\_xcmplx\_0 X1) \Rightarrow (\forall X2.(v1\_xcmplx\_0 X2) \Rightarrow ( \\ & k24\_valued\_1 X0 (k3\_xcmplx\_0 X1 X2) = k24\_valued\_1 (k24\_valued\_1 \\ & X0 X2) X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow ( \\ & k3\_xcmplx\_0 X0 X1 = k3\_xcmplx\_0 X1 X0) \end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0 X1) \Rightarrow (\forall X2. \\ & ((v1\_relat\_1 X2) \wedge ((v1\_funct\_1 X2) \wedge (v1\_valued\_0 X2))) \Rightarrow (k24\_valued\_1 \\ & (k24\_valued\_1 X2 X0) X1 = k24\_valued\_1 X2 (k3\_xcmplx\_0 X0 X1)))) \end{aligned}$$