

t19\_int\_1

(TMdmsr8Ebmc6C3sZhJQX3du7pixpg2FRfUM)

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Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $r2\_int\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0 X1) \Rightarrow (X0 = k2\_xcmplx\_0 (k6\_xcmplx\_0 X0 X1) X1)) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0 X1) \Rightarrow (X0 = k6\_xcmplx\_0 (k2\_xcmplx\_0 X0 X1) X1)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_int\_1 X0) \Rightarrow (\forall X1.(v1\_int\_1 X1) \Rightarrow (\forall X2. \\ & (v1\_int\_1 X2) \Rightarrow (\forall X3.(v1\_int\_1 X3) \Rightarrow (\forall X4.(v1\_int\_1 \\ & X4) \Rightarrow (((r2\_int\_1 X0 X1 X2) \wedge (r2\_int\_1 X3 X4 X2)) \Rightarrow (r2\_int\_1 (k6\_xcmplx\_0 \\ & X0 X3) (k6\_xcmplx\_0 X1 X4) X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_int\_1 X0) \Rightarrow (\forall X1.(v1\_int\_1 X1) \Rightarrow (\forall X2. \\ & (v1\_int\_1 X2) \Rightarrow (\forall X3.(v1\_int\_1 X3) \Rightarrow (\forall X4.(v1\_int\_1 \\ & X4) \Rightarrow (((r2\_int\_1 X0 X1 X2) \wedge (r2\_int\_1 X3 X4 X2)) \Rightarrow (r2\_int\_1 (k2\_xcmplx\_0 \\ & X0 X3) (k2\_xcmplx\_0 X1 X4) X2)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_int\_1 X0) \Rightarrow (\forall X1.(v1\_int\_1 X1) \Rightarrow (\forall X2. \\ & (v1\_int\_1 X2) \Rightarrow (\forall X3.(v1\_int\_1 X3) \Rightarrow (((r2\_int\_1 X0 X1 X2) \wedge \\ & (r2\_int\_1 X1 X3 X2)) \Rightarrow (r2\_int\_1 X0 X3 X2)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_int\_1 X0) \Rightarrow (\forall X1.(v1\_int\_1 X1) \Rightarrow (\forall X2. \\ & (v1\_int\_1 X2) \Rightarrow ((r2\_int\_1 X0 X1 X2) \Rightarrow (r2\_int\_1 X1 X0 X2)))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(v1\_int\_1 X0) \Rightarrow (\forall X1.(v1\_int\_1 X1) \Rightarrow (r2\_int\_1 X0 X0 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_int\_1 X0) \wedge (v1\_int\_1 X1)) \Rightarrow (v1\_int\_1 (k6\_xcmplx\_0 X0 X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_int\_1 X0) \wedge (v1\_int\_1 X1)) \Rightarrow (v1\_int\_1 (k2\_xcmplx\_0 X0 X1)) \quad (9)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xcmplx\_0 X0) \quad (10)$$

Assume the following.

$$\forall X0.(v1\_int\_1 X0) \Rightarrow (v1\_xreal\_0 X0) \quad (11)$$

**Theorem 1**

$$\forall X0.(v1\_int\_1 X0) \Rightarrow (\forall X1.(v1\_int\_1 X1) \Rightarrow (\forall X2.(v1\_int\_1 X2) \Rightarrow (\forall X3.(v1\_int\_1 X3) \Rightarrow ((r2\_int\_1 (k2\_xcmplx\_0 X0 X1) X2 X3) \Leftrightarrow (r2\_int\_1 X0 (k6\_xcmplx\_0 X2 X1) X3))))))$$