

## t5\_int\_7

(TMKqYq2Uz8R43G4U6evVe4Wg8X2Q5eC4Egu)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_int\_2 : \iota \Rightarrow o$  be given. Let  $r1\_int\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_newton : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $r1\_nat\_d : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_int\_1 X0) \Rightarrow (\forall X1.(v1\_int\_1 X1) \Rightarrow (\forall X2. \\ & ((v7\_ordinal1 X2) \wedge (v1\_int\_2 X2)) \Rightarrow \neg(r1\_int\_1 X2 (k3\_xcmplx\_0 \\ & X0 X1)) \wedge (\neg(r1\_int\_1 X2 X0) \wedge (\neg(r1\_int\_1 X2 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.((v7\_ordinal1 X1) \wedge ( \\ & v1\_int\_2 X1)) \Rightarrow (\forall X2.((v7\_ordinal1 X2) \wedge (v1\_int\_2 X2)) \Rightarrow \\ & ((r1\_nat\_d X2 (k1\_newton X1 X0)) \Rightarrow (X2 = X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v7\_ordinal1 X0) \wedge (v7\_ordinal1 X1)) \Rightarrow ( \\ & (r1\_nat\_d X0 X1) \Leftrightarrow (r1\_int\_1 X0 X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v7\_ordinal1 X0) \wedge (v7\_ordinal1 X1)) \Rightarrow ( \\ & v7\_ordinal1 (k1\_newton X0 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (v1\_int\_1 X0) \quad (5)$$

### Theorem 1

$$\begin{aligned} & \forall X0.((v7\_ordinal1 X0) \wedge (v1\_int\_2 X0)) \Rightarrow (\forall X1.((v7\_ordinal1 \\ & X1) \wedge (v1\_int\_2 X1)) \Rightarrow (\forall X2.(v7\_ordinal1 X2) \Rightarrow (\forall X3. \\ & (v7\_ordinal1 X3) \Rightarrow ((r1\_int\_1 X0 (k3\_xcmplx\_0 X3 (k1\_newton X1 X2))) \Rightarrow \\ & ((X0 = X1) \vee (r1\_int\_1 X0 X3)))))) \end{aligned}$$