

# t13\_euler\_1 (TMLCsXvDruFVg- wJqZjXj8wq4GriKLWZHwCG)

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

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7\_ordinal1 X2) \Rightarrow (((k3\_int\_2 X0 X1 = np\_1) \wedge (r1\_nat\_d X0 (k3\_xcmplx\_0 \\ & X1 X2)))) \Rightarrow (r1\_nat\_d X0 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_int\_1 X0) \wedge (v1\_int\_1 X1)) \Rightarrow ((r1\_int\_2 X0 X1) \Rightarrow (r1\_int\_2 X1 X0)) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_int\_1 X0) \Rightarrow (\forall X1.(v1\_int\_1 X1) \Rightarrow ((r1\_int\_2 X0 X1) \Leftrightarrow (k3\_int\_2 X0 X1 = np\_1))) \tag{3}$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (v1\_int\_1 X0) \tag{4}$$

## Theorem 1

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7\_ordinal1 X2) \Rightarrow (((r1\_nat\_d X0 (k3\_xcmplx\_0 X1 X2)) \wedge (r1\_int\_2 \\ & X1 X0)) \Rightarrow (r1\_nat\_d X0 X2)))) \end{aligned}$$