

t11\_wsierp\_1  
(TMKiD99q861wn33YyQQcDK7CHkwQ8FtU4DJ)

October 27, 2020

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

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v1\_int\_1 X1) \Rightarrow (\forall X2.(v1\_int\_1 X2) \Rightarrow ((r1\_int\_2 X1 X2) \Rightarrow (r1\_int\_2 (k1\_newton X1 X0) X2)))) \quad (1)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v1\_int\_1 X0) \wedge (v7\_ordinal1 X1)) \Rightarrow (v1\_int\_1 (k1\_newton X0 X1)) \quad (3)$$

**Theorem 1**

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (\forall X2.(v1\_int\_1 X2) \Rightarrow (\forall X3.(v1\_int\_1 X3) \Rightarrow ((r1\_int\_2 X2 X3) \Rightarrow (r1\_int\_2 (k1\_newton X2 X0) (k1\_newton X3 X1))))))$$