Inference at $*$ 1
 of proof for Lemma mul_preserves_lt:

1. $a : \mathbb{Z}$
2. $b : \mathbb{Z}$
3. $n : \mathbb{N}^+$
4. $a < b$

$\vdash (n * a) < (n * b)$
 by ((NSubsetInd 3)
 CollapseTHENA ((Auto_aux (first_nat 1:n) ((first_nat 1:n
 ),(first_nat 3:n)) (first_tok :t) inil_term)))·

 1: . . . . .basecase. . . . . NILNIL

  3. $a < b$
  4. $n : \mathbb{Z}$
  5. $0 < n$
  6. $1 = n$
  $\vdash (n * a) < (n * b)$
 2: . . . . .upcase. . . . . NILNIL

  3. $a < b$
  4. $n : \mathbb{Z}$
  5. $1 < n$
  6. $((n - 1) * a) < ((n - 1) * b)$
  $\vdash (n * a) < (n * b)$
 .