

Inference at \* 1 0 1 1  
of proof for Lemma integer sqrt:

.....downcase..... NILNIL

1.  $n : \mathbb{Z}$
2.  $n < 0$
3.  $((n+1) \geq 0) \Rightarrow (\exists r:\mathbb{N}. (((r * r) \leq (n+1)) \& ((n+1) < ((r+1) * (r+1))))))$   
 $\vdash (n \geq 0) \Rightarrow (\exists r:\mathbb{N}. (((r * r) \leq n) \& (n < ((r+1) * (r+1))))))$   
by D 0

1:

4.  $n \geq 0$   
 $\vdash \exists r:\mathbb{N}. (((r * r) \leq n) \& (n < ((r+1) * (r+1))))$

2: .....wf..... NILNIL

$\vdash (n \geq 0) \in \mathbb{P}_1$

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