

Inference at \* 1 0  
of proof for Lemma neg\_assert\_of\_eq\_int:

1.  $x : \mathbb{Z}$
2.  $y : \mathbb{Z}$
- $\vdash (\neg(\uparrow(x =_0 y))) \iff x \neq y$   
by PERMUTE{1:n, 2:n, 3:n, 3:n, 4:n, 5:n, 6:n, 7:n, 8:n, 9:n}
- 1: ....wf..... NILNIL
- $\vdash (\neg(\uparrow(x =_0 y))) \in \mathbb{P}_1$
- 2: ....wf..... NILNIL
- $\vdash (\neg(x = y)) \in \mathbb{P}_1$
- 3: ....wf..... NILNIL
- $\vdash x \neq y \in \mathbb{P}_1$
- 4: ....wf..... NILNIL
- $\vdash (\uparrow(x =_0 y)) \in \mathbb{P}_1$
- 5: ....wf..... NILNIL
- $\vdash (x = y) \in \mathbb{P}_1$
- 6: ....wf..... NILNIL
- $\vdash x \in \mathbb{Z}$
- 7: ....wf..... NILNIL
- $\vdash y \in \mathbb{Z}$
- 8: ....wf..... NILNIL
- $\vdash x \neq y = x \neq y$
- 9:
- $\vdash (\neg(x = y)) \iff x \neq y$
- .