

Inference at \* 1 0 4 2  
of proof for Lemma eq\_int\_cases\_test:

1.  $A : \text{Type}$
  2.  $x : A$
  3.  $y : A$
  4.  $P : A \rightarrow \mathbb{P}$
  5.  $i : \mathbb{Z}$
  6.  $j : \mathbb{Z}$
  7.  $\exists bb : \mathbb{B}. ((i =_0 j) = bb)$
  8.  $P(\text{if } (i =_0 j) \text{ then } x \text{ else } y \text{ fi})$
  9.  $\mathbb{B} \in \text{Type}$
  10.  $(i =_0 j) \in \mathbb{B}$
  11.  $\forall bb : \mathbb{B}. ((i =_0 j) = bb) \in \text{Type}$
- $\vdash P(\text{if } (i =_0 j) \text{ then } x \text{ else } y \text{ fi})$   
by ( $\backslash p.D$  (get\_int\_arg 'i' p) p)

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7.  $bb : \mathbb{B}$
  8.  $(i =_0 j) = bb$
  9.  $P(\text{if } (i =_0 j) \text{ then } x \text{ else } y \text{ fi})$
  10.  $\mathbb{B} \in \text{Type}$
  11.  $(i =_0 j) \in \mathbb{B}$
  12.  $\forall bb : \mathbb{B}. ((i =_0 j) = bb) \in \text{Type}$
- $\vdash P(\text{if } (i =_0 j) \text{ then } x \text{ else } y \text{ fi})$
- .