Inference at $*$ 1 0 4 2
 of proof for Lemma eq_int_cases_test:

1. A : 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(if $(i =_0 j)$ then x else y fi)
9. $\mathbb{B} \in$ Type
10. $(i =_0 j) \in \mathbb{B}$
11. $\forall bb{:}\mathbb{B}.\ ((i =_0 j) = bb) \in$ Type

$\vdash$ P(if $(i =_0 j)$ then x else y fi)
  by (\p.D (get_int_arg ‘i‘ p) p)

  1:

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

    $\vdash$ P(if $(i =_0 j)$ then x else y fi)
  .