

## **decidable-equality**<sup>11,40</sup>

ABS: EqDecider( $T$ ) **deq**

STM: deq\_wf

ABS: eqof( $d$ ) **eqof**

STM: eqof\_wf

STM: deq\_property

STM: eqof\_eq\_btrue

STM: eqof\_equal\_btrue

ABS:  $f^{**}(x)$  **fix**

STM: fix\_wf

STM: fix\_property

STM: fix\_step

STM: fix\_connected

STM: strong-subtype-deq

STM: strong-subtype-deq-subtype

STM: nat-deq-aux

ABS: NatDeq **nat-deq**

STM: nat-deq\_wf

STM: atom-deq-aux

ABS: AtomDeq **atom-deq**

STM: atom-deq\_wf

STM: atom2-deq-aux

ABS: Atom2Deq **atom2-deq**

STM: atom2-deq\_wf

STM: bool-deq-aux

ABS: BoolDeq **bool-deq**

STM: bool-deq\_wf  
 ABS: proddeq( $a; b$ ) **proddeq**  
 STM: proddeq\_wf  
 ABS: product-deq( $A; B; a; b$ ) **product-deq**  
 STM: product-deq\_wf  
 ABS: sumdeq( $a; b$ ) **sumdeq**  
 STM: sumdeq\_wf  
 STM: subtype-deq  
 STM: subtype\_rel-deq  
 ABS: union-deq( $A; B; a; b$ ) **union-deq**  
 STM: union-deq\_wf  
 ABS: deq-member( $eq; x; L$ ) **deq-member**  
 STM: deq-member\_wf  
 STM: assert-deq-member  
 ABS: DS( $A$ ) **discrete\_struct**  
 STM: discrete\_struct\_wf  
 ABS: dstype( $TypeNames; d; a$ ) **dstype**  
 STM: dstype\_wf  
 STM: decidable\_\_dstype\_equal  
 ABS: dsdeq( $d; a$ ) **dsdeq**  
 STM: dsdeq\_wf  
 ABS: dseq( $d; a$ ) **dseq**  
 STM: dseq\_wf  
 ABS:  $x = y$  **eq\_ds**  
 STM: eq\_ds\_wf  
 STM: ds\_property  
 ABS: insert( $a; L$ ) **insert**

STM: insert\_wf  
 STM: insert\_property  
 STM: no\_repeats-insert  
 STM: member-insert  
 ABS: l-union( $eq; as; bs$ ) **l-union**  
 STM: l-union\_wf  
 STM: member-union  
 STM: no\_repeats\_union  
 ABS: l-union-list( $eq; ll$ ) **l-union-list**  
 STM: l-union-list\_wf  
 STM: member-l-union-list  
 STM: no\_repeats-union-list  
 ABS: remove-repeats( $eq; L$ ) **remove-repeats**  
 STM: remove-repeats\_wf  
 STM: remove-repeats\_property  
 STM: member-remove-repeats  
 ABS: list-diff( $eq; as; bs$ ) **list-diff**  
 STM: list-diff\_wf  
 STM: list-diff-property  
 STM: member-list-diff  
 ABS: IdDeq **id-deq**  
 STM: id-deq\_wf  
 ABS:  $a = b$  **eq\_id**  
 STM: eq\_id\_wf  
 STM: eq\_id\_self  
 STM: assert-eq-id  
 STM: decidable\_equal\_Id

STM: eq-id-test  
 ABS: IdLnkDeq **idlnk-deq**  
 STM: idlnk-deq\_wf  
 ABS:  $a = b$  **eq\_lnk**  
 STM: eq\_lnk\_wf  
 STM: assert-eq-lnk  
 STM: decidable\_equal\_IdLnk  
 ABS: isrcvl( $l;k$ ) **isrcvl**  
 STM: isrcvl\_wf  
 STM: assert-isrcvl  
 STM: lconnects-transitive  
 STM: decidable\_l\_member  
 STM: decidable\_l\_disjoint  
 ABS: lintersection( $eq;L_1;L_2$ ) **lintersection**  
 STM: lintersection\_wf  
 STM: member-intersection  
 STM: ldisjoint\_intersection  
 STM: ldisjoint\_intersection2  
 STM: disjoint-iff-null-intersection  
 STM: ldisjoint\_intersection\_implies  
 STM: ldisjoint\_intersection\_implies2  
 ABS: KindDeq **Kind-deq**  
 STM: Kind-deq\_wf  
 ABS:  $a = b$  **eq\_knd**  
 STM: eq\_knd\_wf  
 STM: eq\_knd\_self  
 STM: assert-eq-knd

STM: `decidable_equal_Kind`

ABS: `locl_rcv{locl_rcv_compseq_tag_def:ObjectId}(tg; l; a) locl_rcv_compseq_tag_def`

ABS: `rcv_locl{rcv_locl_compseq_tag_def:ObjectId}(a; tg; l) rcv_locl_compseq_tag_def`

ABS: `locl_locl{locl_locl_compseq_tag_def:ObjectId}(b; a) locl_locl_compseq_tag_def`

ABS: `rcv_rcv{rcv_rcv_compseq_tag_def:ObjectId}(t'; l'; t; l) rcv_rcv_compseq_tag_def`

STM: `map_concat_filter_lemma1`

STM: `map_concat_filter_lemma2`

ABS: StandardDS **standard-ds**

STM: `standard-ds_wf`

ABS: `index(L;x) l_index`

STM: `l_index_wf`

STM: `l_index_hd`

STM: `select_l_index`

STM: `l_before_l_index`

STM: `l_before_l_index_le`

ABS: `has_src(i;k) has_src`

STM: `has_src_wf`

STM: `assert_has_src`

ABS: `has_loc(k;i) has_loc`

STM: `has_loc_wf`

STM: `assert_has_loc`

STM: `subtype_set_has_loc`

ABS: `kind_loc(k;i) kind_loc`

STM: `kind_loc_wf`

ABS: LocKnd **LocKnd**

STM: `LocKnd_wf`

ABS: `locknd_deq() locknd-deq`

STM: locknd-deq\_wf  
 ABS: let  $i,k:\text{LocKnd} = ik$  in  $P(i;k)$  **locknd-spread**  
 STM: locknd-spread\_wf  
 STM: locknd-spread\_wf2  
 ABS: locknd( $i;k$ ) **locknd**  
 STM: locknd\_wf  
 STM: locknd\_functionality\_isrcv  
 ABS: MaName **MaName**  
 STM: MaName\_wf  
 ABS: maname-deq() **maname-deq**  
 STM: maname-deq\_wf  
 STM: decidable\_equal\_MaName  
 ABS: name-case( $n;i,k.A(i;k);j,x.B(j;x)$ ) **name-case**  
 STM: name-case\_wf  
 STM: decidable\_l\_disjoint\_manames  
 ABS: if  $nms_1$  and  $nms_2$  overlap then  $x$  else  $y$  fi **manames-overlap-case**  
 STM: manames-overlap-case\_wf  
 STM: manames-overlap-case-symmetry  
 STM: manames-overlap-nil  
 STM: manames-overlap-nil2  
 STM: no\_repeats\_mu\_index  
 STM: no\_repeats\_l\_index  
 STM: no\_repeats\_l\_index-inj