

first_index_equal^{4,23}

$\forall T:\text{Type}, L_1, L_2:T \text{ List}, P, Q:(T \rightarrow \mathbb{B})$.

$(L_1 \text{ agree_on}(T;a.P(a)) L_2)$

$\Rightarrow \text{index-of-first } a \text{ in } L_1.P(a) \wedge_2 Q(a) = \text{index-of-first } a \text{ in } L_2.P(a) \wedge_2 Q(a) \in \mathbb{Z}$