

fpf-join-ap^{11,40}

$\forall A:\text{Type}, B:(A \rightarrow \text{Type}), eq:\text{EqDecider}(A), f,g:\text{fpf}(A; a.B(a)), x:A.$
 $(\uparrow \text{fpf-dom}(eq; x; \text{fpf-join}(eq; f; g)))$
 $\Rightarrow (\text{fpf-ap}(\text{fpf-join}(eq; f; g); eq; x))$
 $=$
 $\text{if fpf-dom}(eq; x; f) \text{ then fpf-ap}(f; eq; x) \text{ else fpf-ap}(g; eq; x) \text{ fi}$
 $\in B(x)$