

```

theory Hnr
  imports Hnr_Rules Hnr_Fallback Hnr_Frame Hnr_Recursion
begin

lemma let_to_bind: "(let x = v in f x) = (do { x ← Some v; f x })"

method hnr_rule methods frame_match_atom uses rule_set =
  (rule rule_set[framed] hnr_pass[framed], hnr_frame_inference frame_match_atom)
  | rule hnr_rule hnr_const

method hnr_step methods frame_match_atom keep_atom uses rule_set =
  simp only: let_to_bind
  | hnr_rule frame_match_atom rule_set: rule_set
  | keep_drop keep_atom
  | normalize
  | merge
  | partial_function_mono
  | hnr_fallback

method hnr methods frame_match_atom keep_atom uses rule_set =
  (hnr_step frame_match_atom keep_atom rule_set: rule_set)+

end

```