Cases on While true:

**h\_hs** : c s,

**h\_hp** : (p, s) ⟹ h\_t,

**h\_hw** : (while c p, h\_t) ⟹ t

Applying while true big step:

**h\_hs** : c s,

**h\_h\_t** : σ,

**h\_h\_h₁** : (p, s) ⟹ h\_h\_t,

**h\_h\_h₂** : (while c p, h\_h\_t) ⟹ t

**⊢** (while c p, s) ⟹ t

applying while false:

**⊢** ¬c s

Cases on seq:

**l\_h₁** : (p, s) ⟹ l\_t,

**l\_h₂** : (skip σ, l\_t) ⟹ t

**⊢** (p, s) ⟹ t

Applying seq:

Will leave you with one big\_step and the resulting state after the big\_step

**s** : (p, s) ⟹ t

**⊢** (seq p skip, s) ⟹ t

To:

**2 goals**

**σ** : Type,

**p** : program σ,

**s t** : σ,

**s** : (p, s) ⟹ t

**⊢** (p, s) ⟹ t

**σ** : Type,

**p** : program σ,

**s t** : σ,

**s** : (p, s) ⟹ t

**⊢** (skip σ, t) ⟹ t

Cases on ite:

Will result in true and false to prove, true:

**h\_hs** : c s,

false:

**h\_hs** : ¬c s

applying ite will need you to apply it to true and false:

**h\_hs** : c s,

**h\_hs** : ¬c s,