Goal

```
∃ Γ v, Γ ⊢ denote v
= Goal?
```

```
M.find (x, y)
  (F.add (x, y) f
(F.add (a, b) c m))
   = Some f
```

```
Γ = [(1,x); (2,y); (3,f);
(4,a); (5,b); (6,c);
(7,m)]
```

```
v = Find 1 2 3
    (Add 1 2 3
    (Add 4 5 6 7))
```

$$\exists\ P,\ \Gamma \vdash P\ v = \texttt{true}$$

$$\rightarrow \texttt{denote}\ v?$$

```
match v with
  Find x y z m ->
      map_contains x y z m
end
```

```
Γ ⊢ P v = true
  ← denote v
  ← Goal
```

What is needed?

reify Goal (Ltac)

change Goal (tactic)

⇒ ⌜ ⊢ denote v

```
apply soundness proof
⇒ Γ ⊢ P v = true
```

```
vm_compute;
reflexivity
```

CPDT Ch.15