```
prime_decider_exists  THM

⊢  ∃!∈{p:(ℤ→𝔹)| ∀x:ℤ. p(x) ⟺ prime(x) }
| by BackThru:
|    Thm*  ∀P:(A→Type).
|          (∀x:A. Dec(P(x))) ⇒ (∃!∈{p:(A→𝔹)| ∀x:A. p(x) ⟺ P(x) })
|    {dec_pred_imp_bool_decider_exists}
|
⊢  ∀x:ℤ. Dec(prime(x))
  by Lemma Thm*  ∀x:ℤ. Dec(prime(x))    {decidable__prime}
END
```