```
equal_append_front  THM

⊢  ∀T:Type, x,y,z:T List. (x @ z) = (y @ z) ⟺ x = y  by Auto
|
|\
| 1. T : Type
| 2. x : T List
| 3. y : T List
| 4. z : T List
| 5. (x @ z) = (y @ z)
| ⊢  x = y
|   by ((Inst
|        Thm* ∀x1,z,x2,x3:T List.
|             ||x1|| = ||z|| ∈ ℤ
|             ⇒
|             (x1 @ x2) = (z @ x3) ⇒ x1 = z & x2 = x3
|        {equal_appends_eq}
|        [T;x;y;z;z])
|       THEN
|       (ApFunToHypEquands ‘q’ ||q|| ℤ -1))
|      THEN
|      (RWO
|       Thm* ∀as,bs:T List. ||as @ bs|| = ||as||+||bs|| ∈ ℤ
|       {length_append}
|       -1)
|
.\
. 1. T : Type
. 2. x : T List
. 3. y : T List
. 4. z : T List
. 5. x = y
. ⊢  (x @ z) = (y @ z)  by Obvious
END
```