```
sum_via_intseg_split_pluck  THM

⊢  ∀a,c,b:ℤ, e:({a..b⁻}→ℤ).
|  a≤c
|  ⇒
|  c<b
|  ⇒
|  (Σ i:{a..b⁻}. e(i))
|  =
|  (Σ i:{a..c⁻}. e(i))+e(c)+(Σ i:{c+1..b⁻}. e(i))
| by Inst:
|    Thm*  ∀f:(A→A→A), u:A.
|          is_ident(A; f; u)
|          ⇒
|          is_assoc_sep(A; f)
|          ⇒
|          (∀a,c,b:ℤ, e:({a..b⁻}→A).
|           a≤c
|           ⇒
|           c<b
|           ⇒
|           (Iter(f;u) i:{a..b⁻}. e(i))
|           =
|           f
|           ((Iter(f;u) i:{a..c⁻}. e(i))
|           ,f(e(c),Iter(f;u) i:{c+1..b⁻}. e(i))))
|    {iter_via_intseg_split_pluck}
|    Using:[ℤ | λx,y. x+y | 0]
|    THEN
|    OnAllClauses Reduce
|
|\
| .....antecedent .....
| ⊢  is_ident(ℤ; (λx,y. x+y); 0)  by Analyze THEN Reduce Concl
| |
| 1. x : ℤ
| ⊢  0+x = x & x+0 = x  by Auto
|
.\
. .....antecedent .....
. ⊢  is_assoc_sep(ℤ; (λx,y. x+y))  by Analyze THEN Reduce Concl
. |
. 1. x : ℤ
. ⊢  ∀y@0,y:ℤ. x+y@0+y = x+y@0+y  by Auto
END
```