```
geom_speed_lbound  THM

⊢  ∀q,n:ℕ, i:ℕ+. Σ(q↑n⁻)+(q↑n)≤Σ(q↑n+i⁻)  by UnivCD
|
1. q : ℕ
2. n : ℕ
3. i : ℕ+
⊢  Σ(q↑n⁻)+(q↑n)≤Σ(q↑n+i⁻)
| by Inst Thm* ∀q,n,i:ℕ. Σ(q↑n⁻)≤Σ(q↑n+i⁻)    {geom_ndecrease}
|    [q;n+1;i-1]
|
4. Σ(q↑n+1⁻)≤Σ(q↑n+1+i-1⁻)
⊢   by Assert (n+1+i-1 = n+i) THEN RWH (HypC 5) 4
|
4. Σ(q↑n+1⁻)≤Σ(q↑n+i⁻)
5. n+1+i-1 = n+i
⊢
  by Inst
     Thm* ∀q,n:ℕ. Σ(q↑n+1⁻) = Σ(q↑n⁻)+(q↑n) ∈ ℕ    {geom_series_step}
     [q;n]
END
```