```
−ₛ≡ : ∀ {f d d′ n} → {n≤d′ : n ≤ d′} → (d′ − n) n≤d′ ≡ d
        → ⟨ f , d ⟩ ≡ (⟨ f , d′ ⟩ −ₛ n) n≤d′
−ₛ≡ p rewrite p = refl

l-sub {n = n} d′−n≡d c = sub l (−ₛ≡ {n = n} d′−n≡d) c

≤ₛ-refl : ∀{sd : SD} → sd ≤ₛ sd
≤ₛ-refl {⟨ f , d ⟩} = ≤-d ≤-refl

≤ₛ-trans : ∀{sd sd′ sd″ : SD} → sd ≤ₛ sd′ → sd′ ≤ₛ sd″ → sd ≤ₛ sd″
≤ₛ-trans (<-f f<f′) (≤-d _) = <-f f<f′
≤ₛ-trans (<-f f<f′) (<-f f′<f″) = <-f (<-trans f<f′ f′<f″)
≤ₛ-trans (≤-d _) (<-f f′<f″) = <-f f′<f″
≤ₛ-trans (≤-d d≤d′) (≤-d d′≤d″) = ≤-d (≤-trans d≤d′ d′≤d″)

+ₛ→≤ₛ : ∀{sd : SD} → ∀{n : ℕ} → sd ≤ₛ sd +ₛ n
+ₛ→≤ₛ = ≤-d +→≤

sub-sd≤ₛ : ∀ {sd sd′ sd″} → sd′ ≡ sd″ → sd ≤ₛ sd′ → sd ≤ₛ sd″
sub-sd≤ₛ sd′≡sd″ sd≤ₛsd′ rewrite sd′≡sd″ = sd≤ₛsd′

sd≤ₛsd′→sd≤ₛsd′−ₛ[d′−[suc-d]] : ∀ {sd sd′} → sd ≤ₛ sd′
  → (δ₁≤δ₂ : suc (SD.d sd) ≤ SD.d sd′)
  → sd ≤ₛ ((sd′ −ₛ ((SD.d sd′ − (suc (SD.d sd))) δ₁≤δ₂)) (−→≤ δ₁≤δ₂))
sd≤ₛsd′→sd≤ₛsd′−ₛ[d′−[suc-d]] {⟨ f , _ ⟩} {⟨ f′ , _ ⟩} (<-f f<f′) _
  = <-f f<f′
sd≤ₛsd′→sd≤ₛsd′−ₛ[d′−[suc-d]] {⟨ f , d ⟩} {⟨ f , d′ ⟩} (≤-d d≤d′) δ₁≤δ₂
  = ≤-d (suc-d≤d′→d≤d′−[d′−[suc-d]] δ₁≤δ₂)
```