```
theory Core_Logic_Appendix imports Core_Logic begin

proposition ‹[] ≫ [p → q → p]›
proof —
  from Imp_R have ?thesis if ‹[p] ≫ [q → p]›
    using that by force
  with Imp_R have ?thesis if ‹[q, p] ≫ [p]›
    using that by force
  with Set_L have ?thesis if ‹[p, q] ≫ [p]›
    using that by force
  with Basic show ?thesis
    by force
qed

proposition ‹[] ≫ [(p → r) → (r → q) → p → q]›
proof —
  from Imp_R have ?thesis if ‹[p → r] ≫ [(r → q) → p → q]›
    using that by force
  with Imp_R have ?thesis if ‹[r → q, p → r] ≫ [p → q]›
    using that by force
  with Imp_R have ?thesis if ‹[p, r → q, p → r] ≫ [q]›
    using that by force
  with Set_L have ?thesis if ‹[r → q, p → r, p] ≫ [q]›
    using that by force
  with Imp_L have ?thesis if ‹[p → r, p] ≫ [r, q]› and ‹[q, p → r,
p] ≫ [q]›
    using that by force
  with Basic have ?thesis if ‹[p → r, p] ≫ [r, q]›
    using that by force
  with Imp_L have ?thesis if ‹[p] ≫ [p, r, q]› and ‹[r, p] ≫ [r,
q]›
    using that by force
  with Basic show ?thesis
    by force
qed

end
```