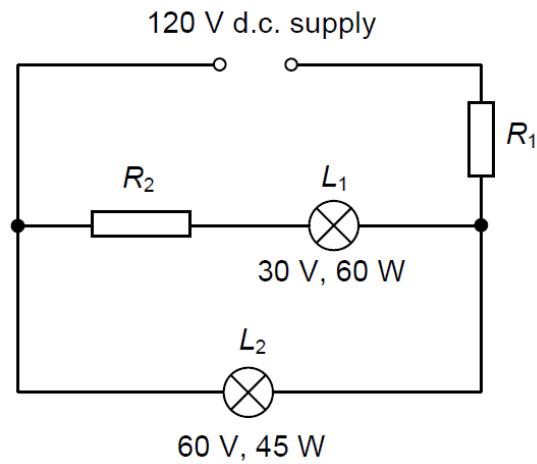


- 21 Two filament lamps L_1 and L_2 rated “30 V, 60 W” and “60 V, 45 W” respectively are connected across a 120 V d.c. supply of negligible internal resistance.



What is the value of the resistance R_1 if both the lamps are operating at their rated powers?

A 15Ω

B 22Ω

C 30Ω

D 80Ω