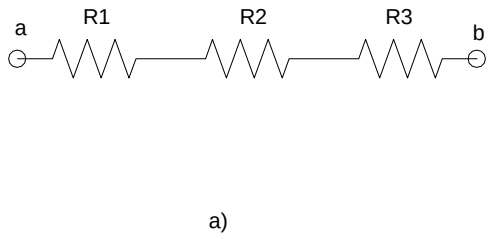
Resistors in Series and Parallel

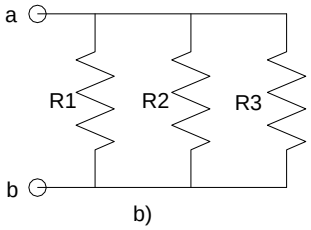
EE 206 Practice Problems

1) Determine the resistance Rab. Assume
   - R1 = 100
   - R2 = 150
   - R3 = 200
2) Determine the resistance Rab. Assume
   - R1 = 500
   - R2 = 400
   - R3 = 300
3) Determine the resistance Rab. Assume
   - R1 = 600
   - R2 = 800
   - R3 = 700
4) Assume Rab = 100 Ohms and
   - R2 = 200
   - R3 = 300

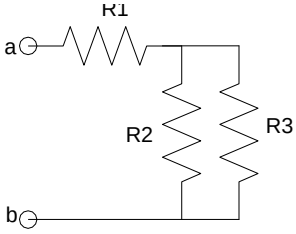
Find R1 (note: the answer might be negative)



a)



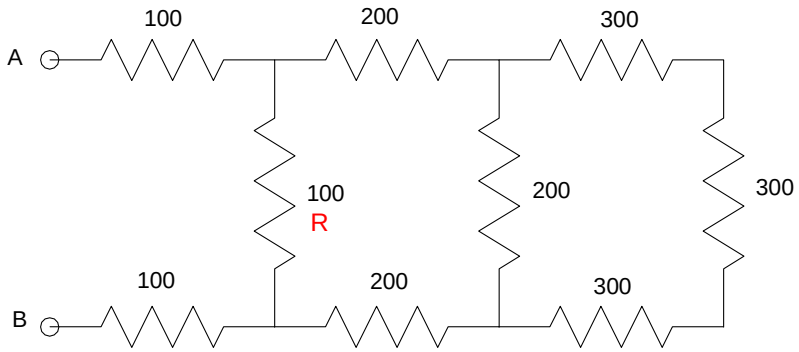
b)



c)

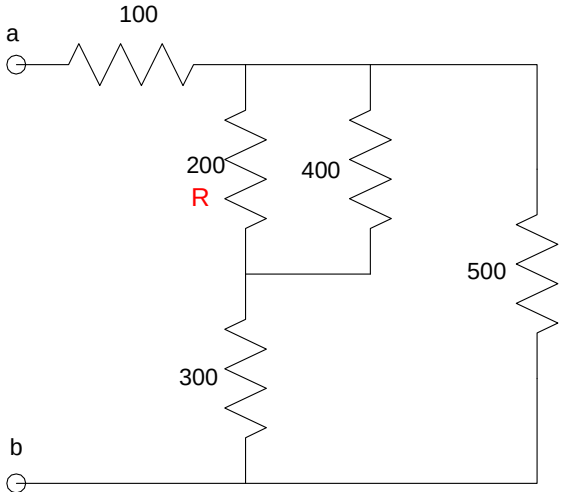
5) Find the resitance Rab

6) Find R so that the resitance Rab = 300 Ohms



7) Find the resistance Rab

8) Find R so that the total resistance Rab is 300 Ohms



Solutions:

Problem 1)

- 1a) Rab = 450
- 1b) Rab = 46.154
- 1c) Rab = 185/714

Problem 2)

- 2a) Rab = 1200
- 2c) Rab = 127.660
- 2c) Rab = 671.429

Problem 3)

- a) Rab = 2100
- b) Rab = 230.137
- c) Rab = 973.333

Problem 4)

- a) R1 = -400
- b) R1 = 600 Ohms
- c) R1 = -20 Ohms

5) Rab = 284.932

6) R1 = 137.931

7) Rab = 332.143

8) R1 = 36.364