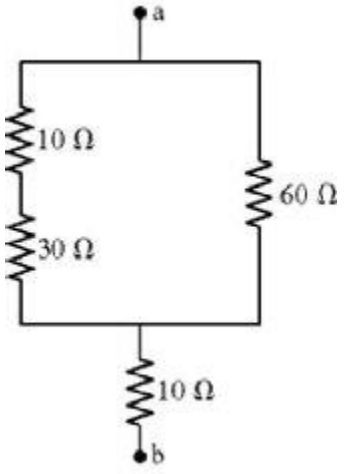
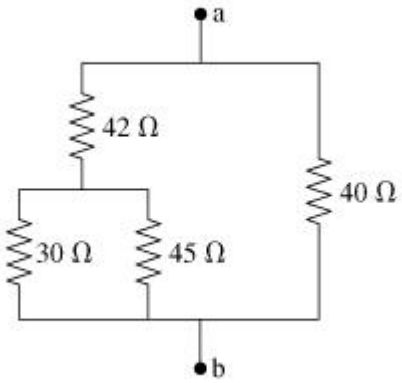
1. What is the equivalent resistance between points a and b in each of the two below circuits?



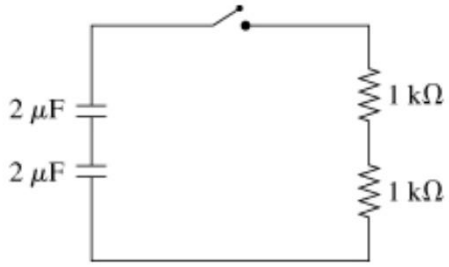


2.

2) For the RC circuit below:

a) How many seconds would it take to discharge the capacitors to 37% of its original value?

b) If your starting voltage were 10 Volts, how many electrons will have flowed through the 1st 1kΩ resistor over this time?



c) How many electrons would have flowed through the 2nd resistor?

d) How many electrons would have flowed through the upper capacitor?

e) How many seconds would it take to discharge the capacitors to 10% of its original value?

f) How many electrons will have flowed through a point on the wire over this time?

Answers: 1a) 34Ω 1b) 24Ω 2a) 2ms 2b) $CV_o(.63)/(e^-)$