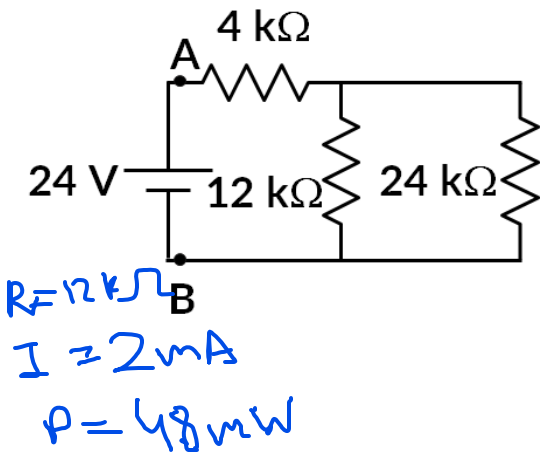
Department of ECE, Bennett University

EECE105L: Fundamentals of Electrical and Electronics Engineering

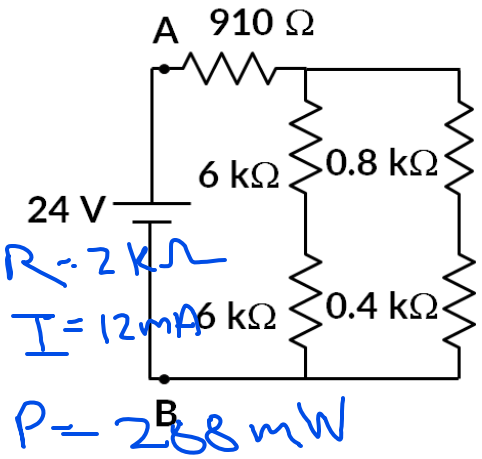
Tutorial Sheet-1

1. For the circuits shown in fig. 1 to fig. 6, find the equivalent resistance between nodes **A** and **B**. What is the current through the circuit and power delivered by the voltage source?



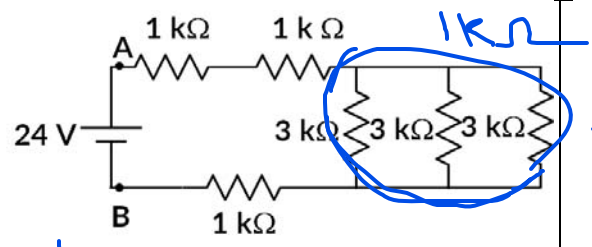
R=12kΩ
I=2mA
P=48mW

Fig. 1



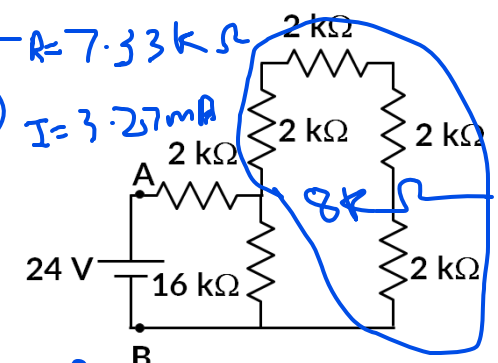
R=2kΩ
I=12mA
P=288mW

Fig. 2



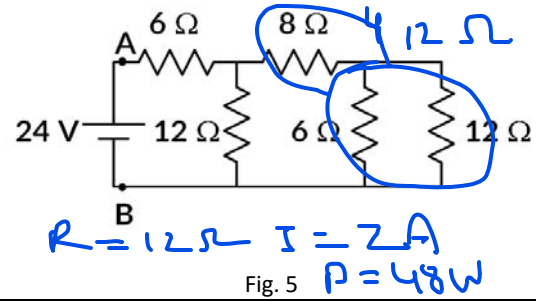
1kΩ
R=4kΩ
I=6mA
P=144mW

Fig. 3



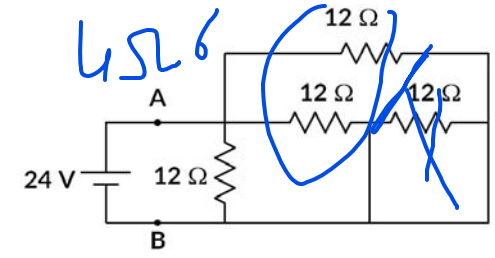
R=7.33kΩ
I=3.27mA
8kΩ
P=78.48mW

Fig. 4



12Ω
R=12Ω I=2A
P=48W

Fig. 5



4Ω6
R=4Ω
I=6A
P=144W

Fig. 6

2. For the circuits shown in fig. 7 to fig. 9, find the equivalent resistance between nodes **A** and **B**. For the circuits in fig. 7 to fig. 9, each resistor has a resistance of **R**.

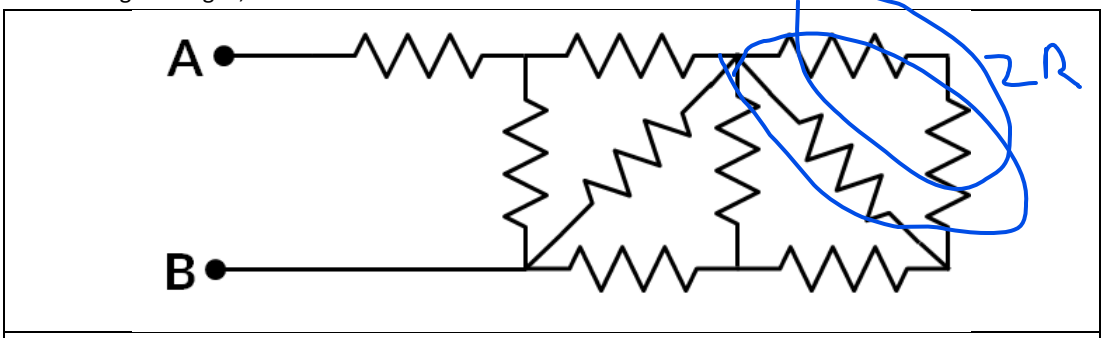


Fig. 7

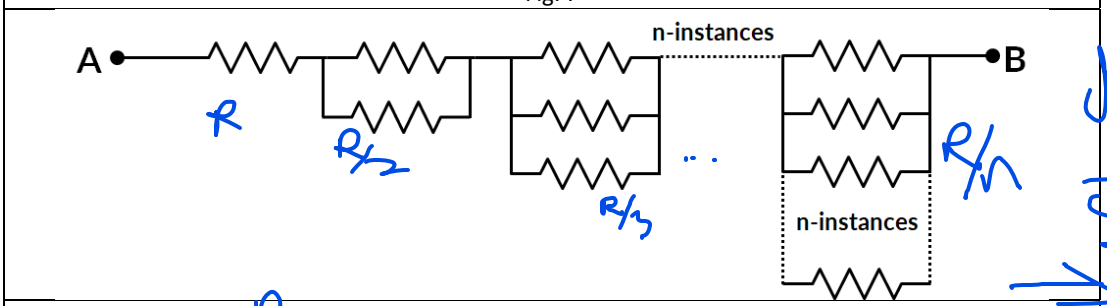


Fig. 8

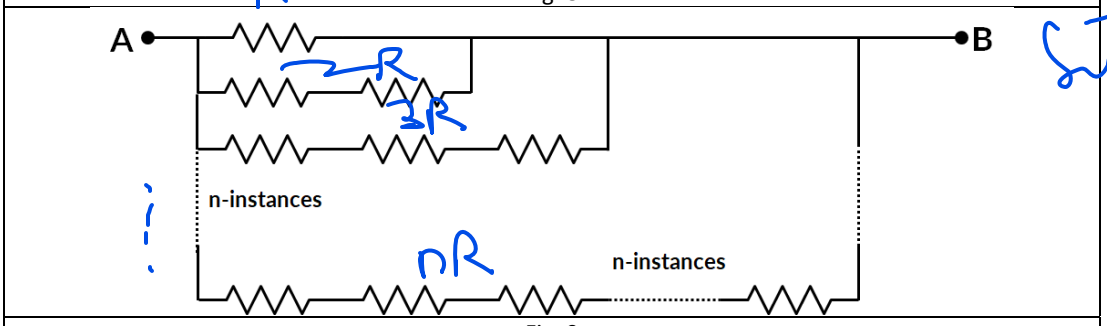


Fig. 9

---------- END OF QUESTIONS ----------

Answers:

Question 1:

	V	R	I	P
Fig. 1	24	12 kΩ	2 mA	48 mW
Fig. 2	24	2 kΩ	12 mA	288 mW
Fig. 3	24	4 kΩ	6 mA	144 mW
Fig. 4	24	7.3 kΩ	3.3 mA	79.2 mW

Fig. 5	24	12 Ω	2 A	48 W
Fig. 6	24	4 Ω	6 A	144 W

Question 2:

Fig. 7: $\frac{89}{55}R$R

Fig 8: ∞

Fig. 9: 0