# Physics 2212
Homework 5 (due: March 26)

1. The electric field inside a 40-cm-long copper wire is 0.050 V/m. (a) What is the potential difference between the ends of the wire? (b) What is the current in the wire? The diameter of the wire is 1 mm.

2. A 50-cm-long gold wire is connected across the terminal of a 20 V battery. If the current in the wire is 1.0 A, what is the wire's diameter?

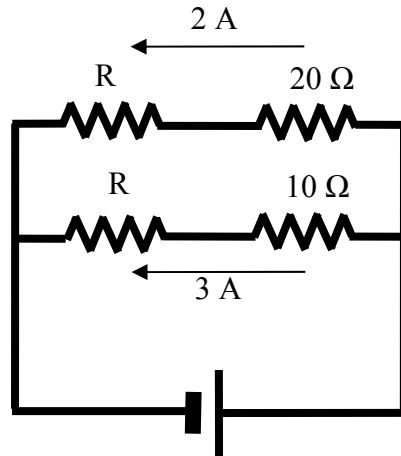**3.** What is the magnitude and the direction of the current through 20 Ohm resistor shown in the figure?
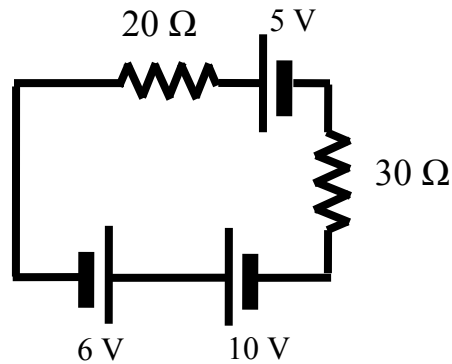
4. What is the equivalent resistance of each group of resistors shown in the figure?
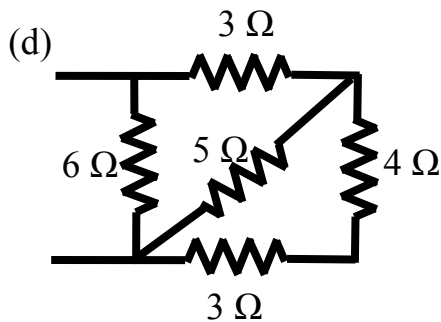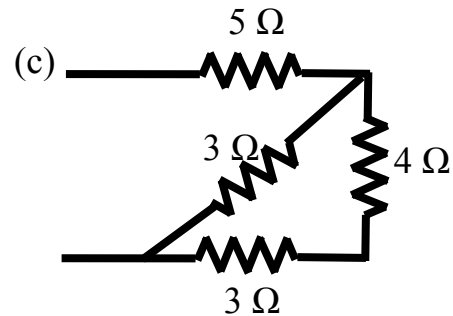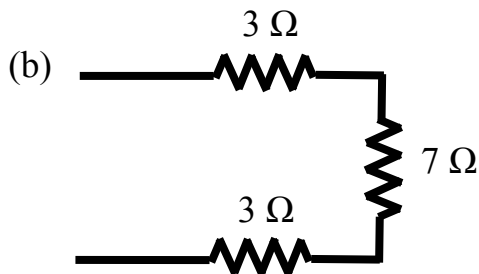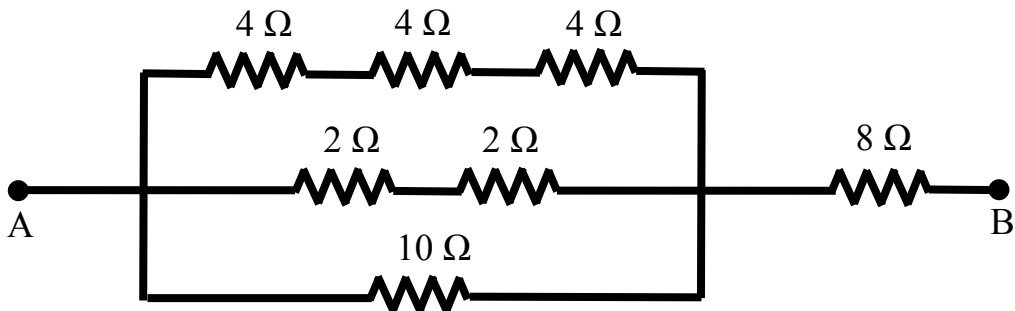
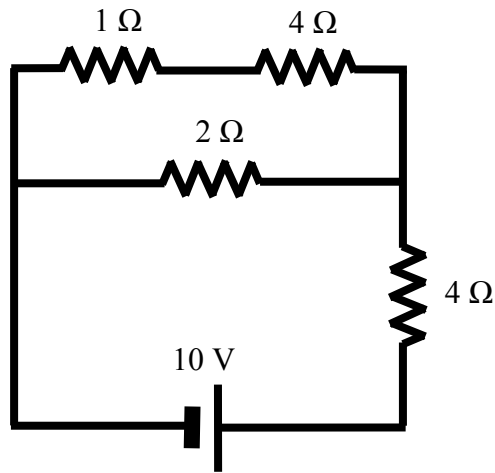**5.** Find an equivalent resistance between points A and B.
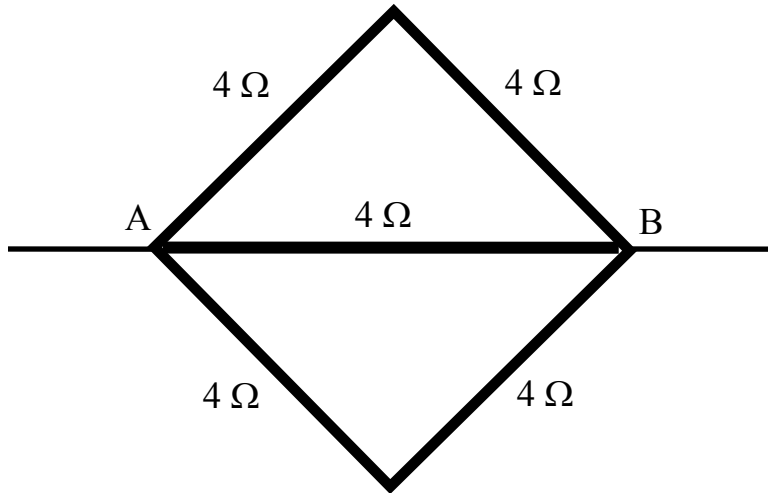
6. What are the resistance R and the emf of the battery in the figure?
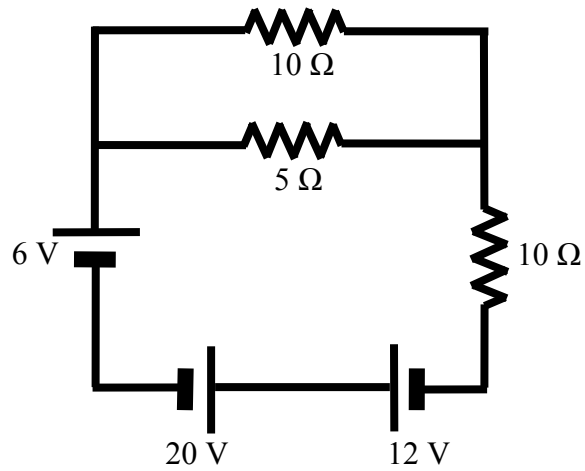

7. What is the equivalent resistance between points A and B?

8. Find the power delivered to 2 Ohm resistor.

9. Find the current in the circuit.

10. Find the current through resistor "1".