Reading Current Along Graphite Layers

Scoring guide · one credit per question · review written work against each rubric

Reading Current Along Graphite Layers

Question 1

Choice (1)

The graphite readings differ between along and across the layers. They use the same material and the same applied voltage.

Question 2

The across-layer reading is 2 mA, so charge does move between the contacts. The smaller current shows that the across-layer path conducts less easily at the same voltage.

Question 3

The 12 mA placement is along the layers. With matching geometry and voltage, its larger current matches the known along-layer reading.

Question 4

The two readings could differ because the current travels different distances or through different cross-sectional areas. Cut a cube from the same graphite with the same layer orientation, then use identical contacts on opposite faces at the same voltage. Accept another method that matches path geometry and voltage while comparing the two directions.