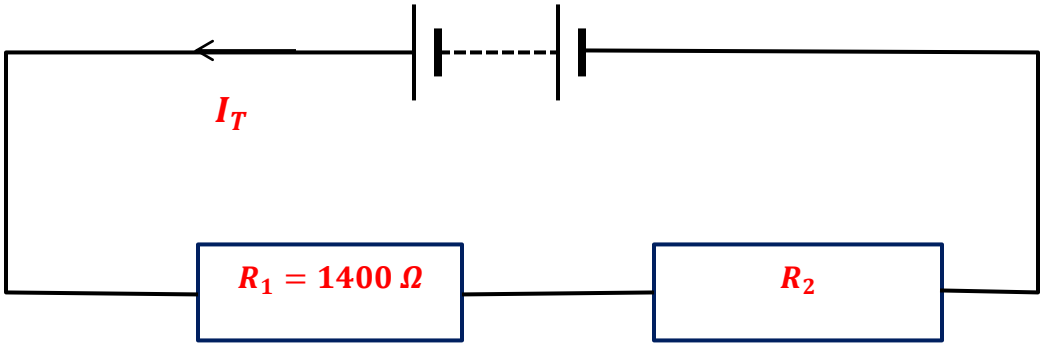
THE OP-AMP

QUESTIONS

SECTION 2: The Potential Divider

Q1

The circuit shows two resistors in series. The battery has an e.m.f of 12 V (i.e. $V_T = 12\,V$). The potential drop (p.d.) across the first resistor (V_1) is 7 V. Study the circuit and calculate $V_2, I_T \; and \; R_2$. (Assume the internal resistance and that of the connecting wires is negligible)

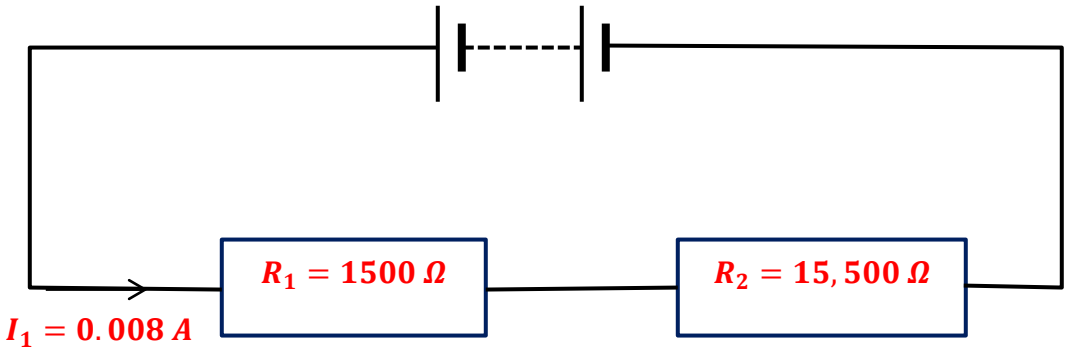


CLICK HERE TO SEE THE WORKING

NEXT QUESTION

Q2

The circuit shows two resistors in series. Their values are as shown in the circuit. The current through the first resistor is $0.008\ A$. Determine the total voltage from the battery. (Assume the internal resistance and that of the connecting wires is negligible).



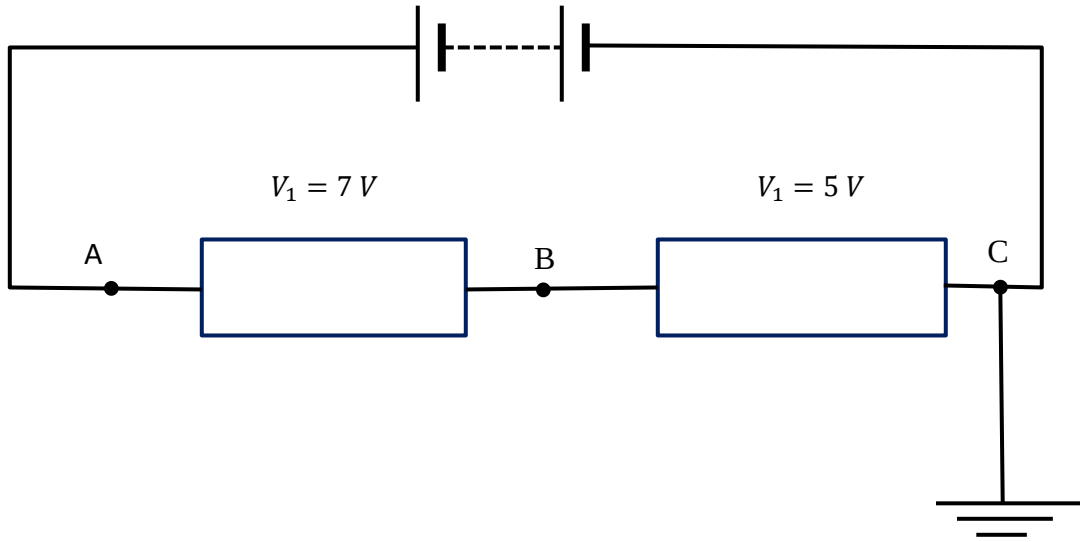
CLICK HERE TO SEE THE WORKING

PREVIOUS QUESTION

NEXT QUESTION

Q3

The circuit shows two resistors in series. The battery has an e.m.f of 12 V (i.e. $V_T = 12\ V$). The potential drop (p.d.) across the two resistors are 7 V *and* 5 V respectively. The circuit is earthed at point C. Determine the potential at point A, B and C. (Assume the internal resistance of battery and that of the connecting wires is negligible)



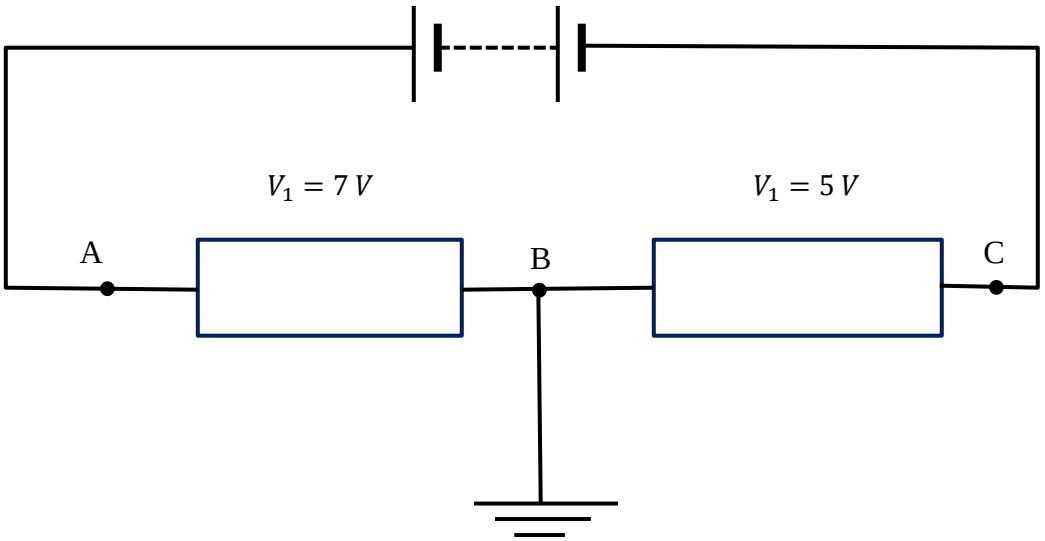
CLICK HERE TO SEE THE WORKING

PREVIOUS QUESTION

NEXT QUESTION

Q4

The circuit shows two resistors in series. The potential drop (p.d.) across the two resistors are $7\ V\ and\ 5\ V$ respectively. The circuit is earthed at point B. Determine the potential at point A, B and C. Hence determine the voltage of the battery.(Assume the internal resistance of battery and that of the connecting wires is negligible).



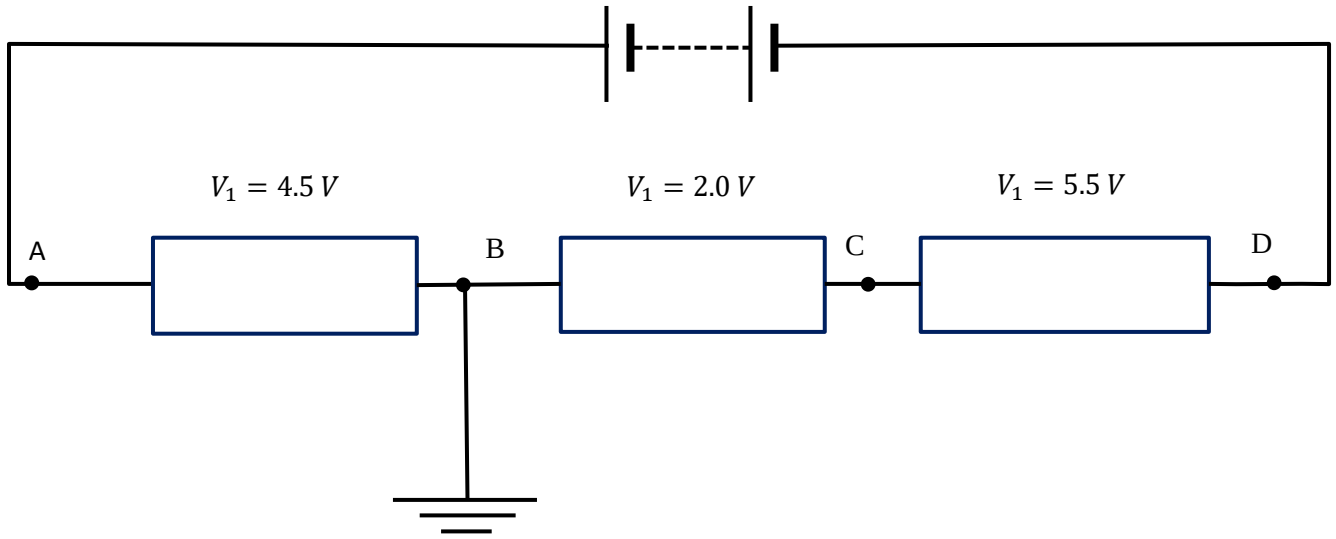
CLICK HERE TO SEE THE WORKING

PREVIOUS QUESTION

NEXT QUESTION

Q5

The circuit shows three resistors in series. The potential drop (p.d.) across the resistors are $4.5\ V\ and\ 2\ V\ and\ 5.5\ V$ respectively. The circuit is earthed at point B. Determine the potential at point A, B,C and D. Hence determine the voltage of the battery. (Assume the internal resistance of battery and that of the connecting wires is negligible).



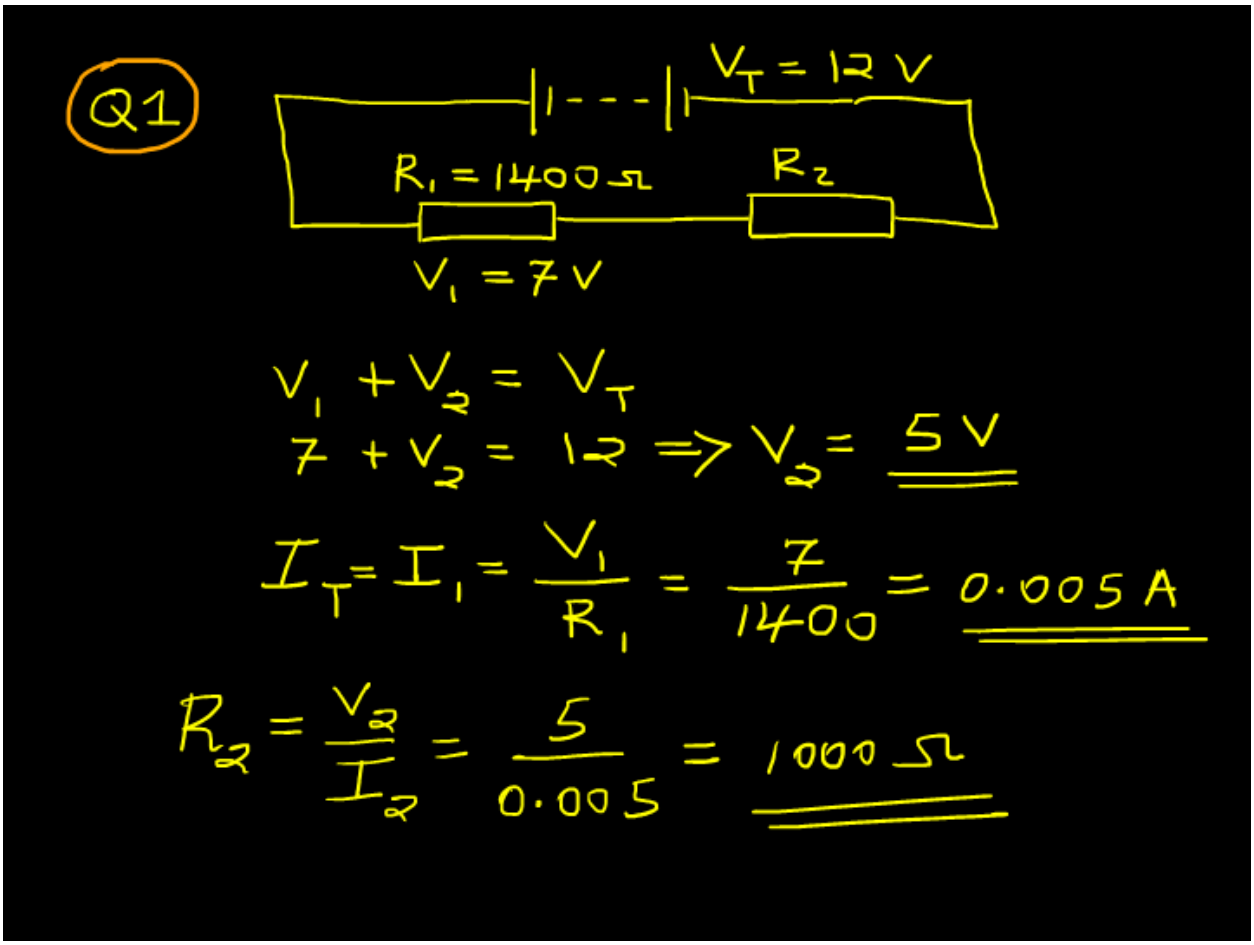
CLICK HERE TO SEE THE WORKING

PREVIOUS QUESTION

ANSWERS

SECTION 2: The Potential Divider

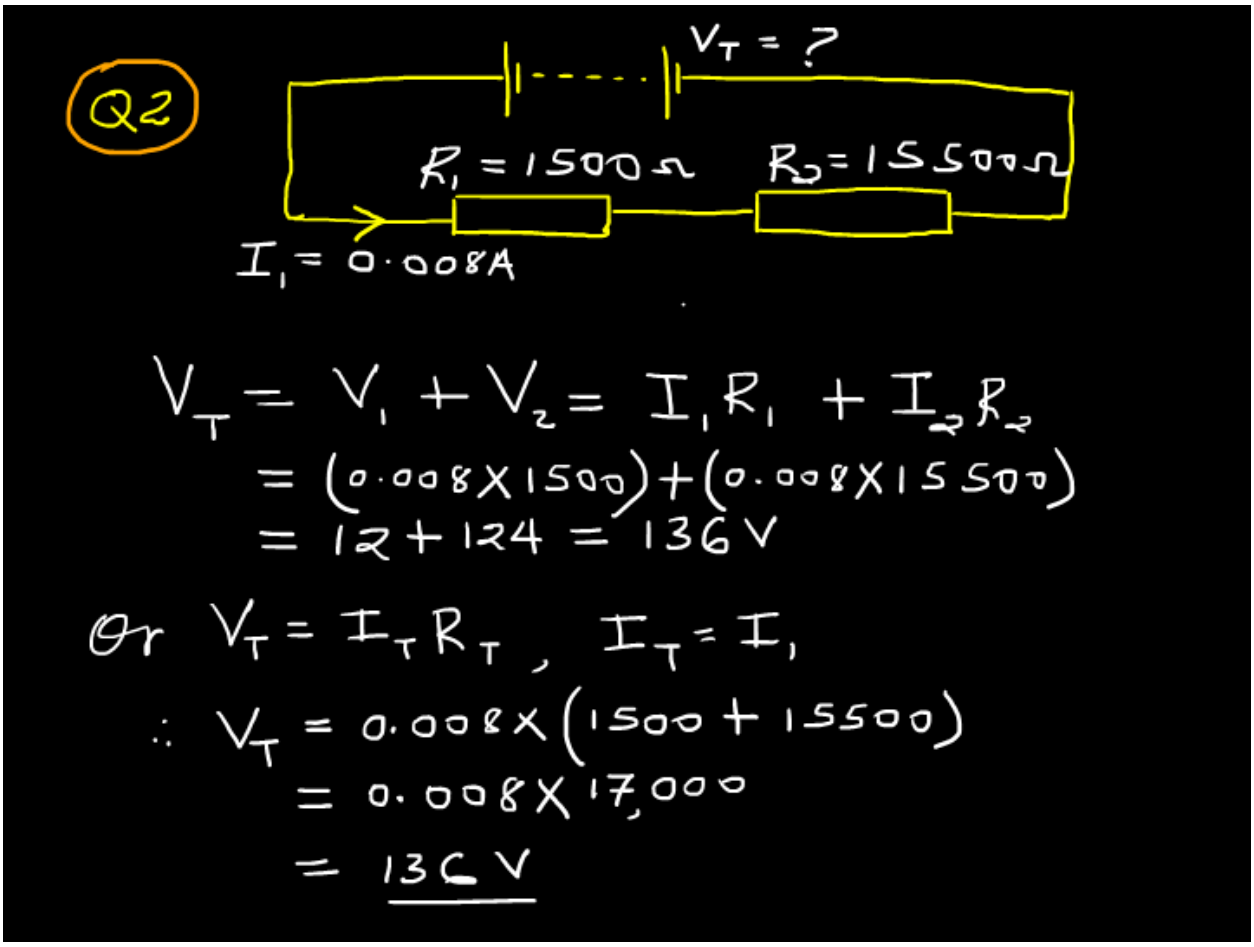
ANSWER TO Q1



GO BACK TO Q1

NEXT QUESTION

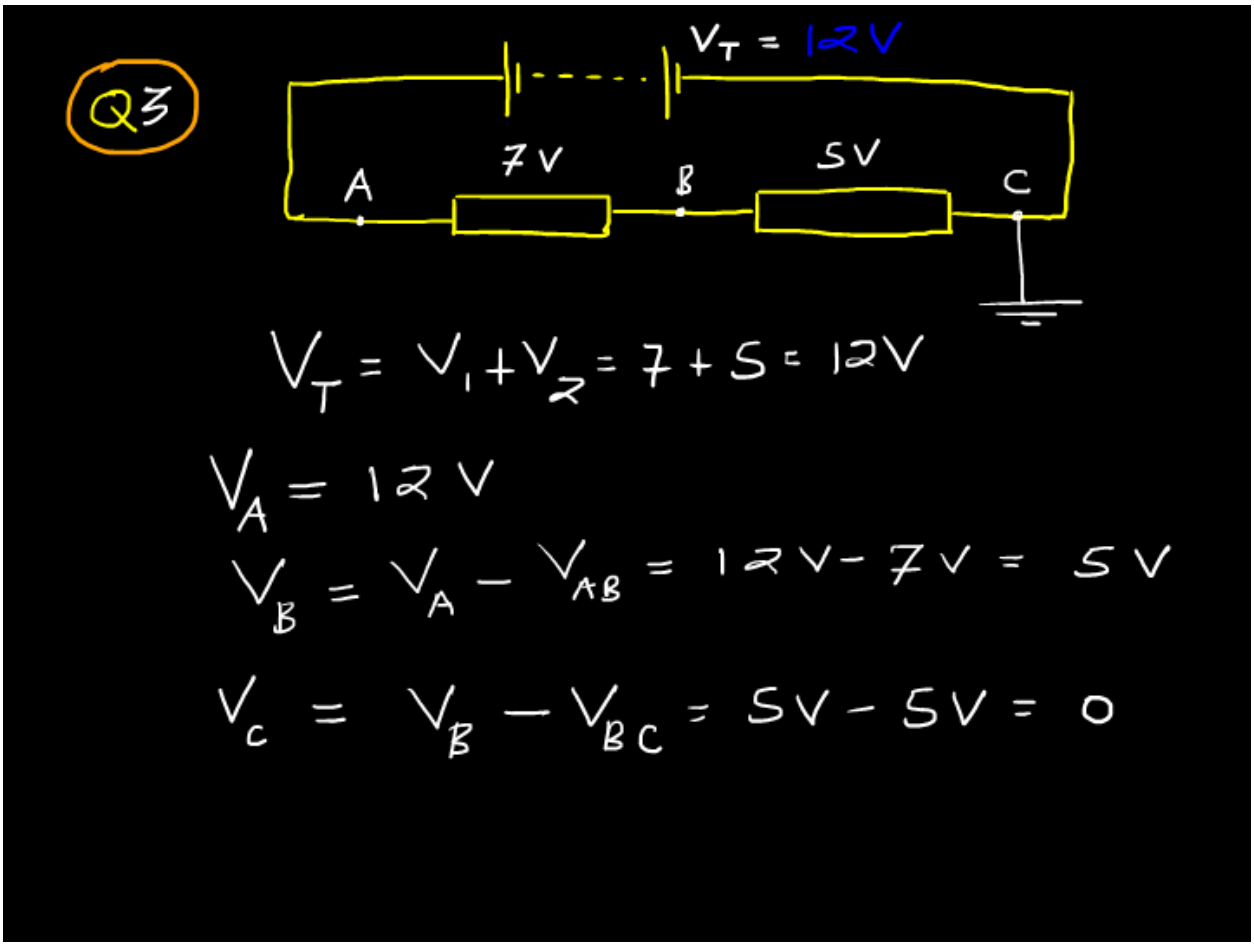
ANSWER TO Q2



GO BACK TO Q2

NEXT QUESTION

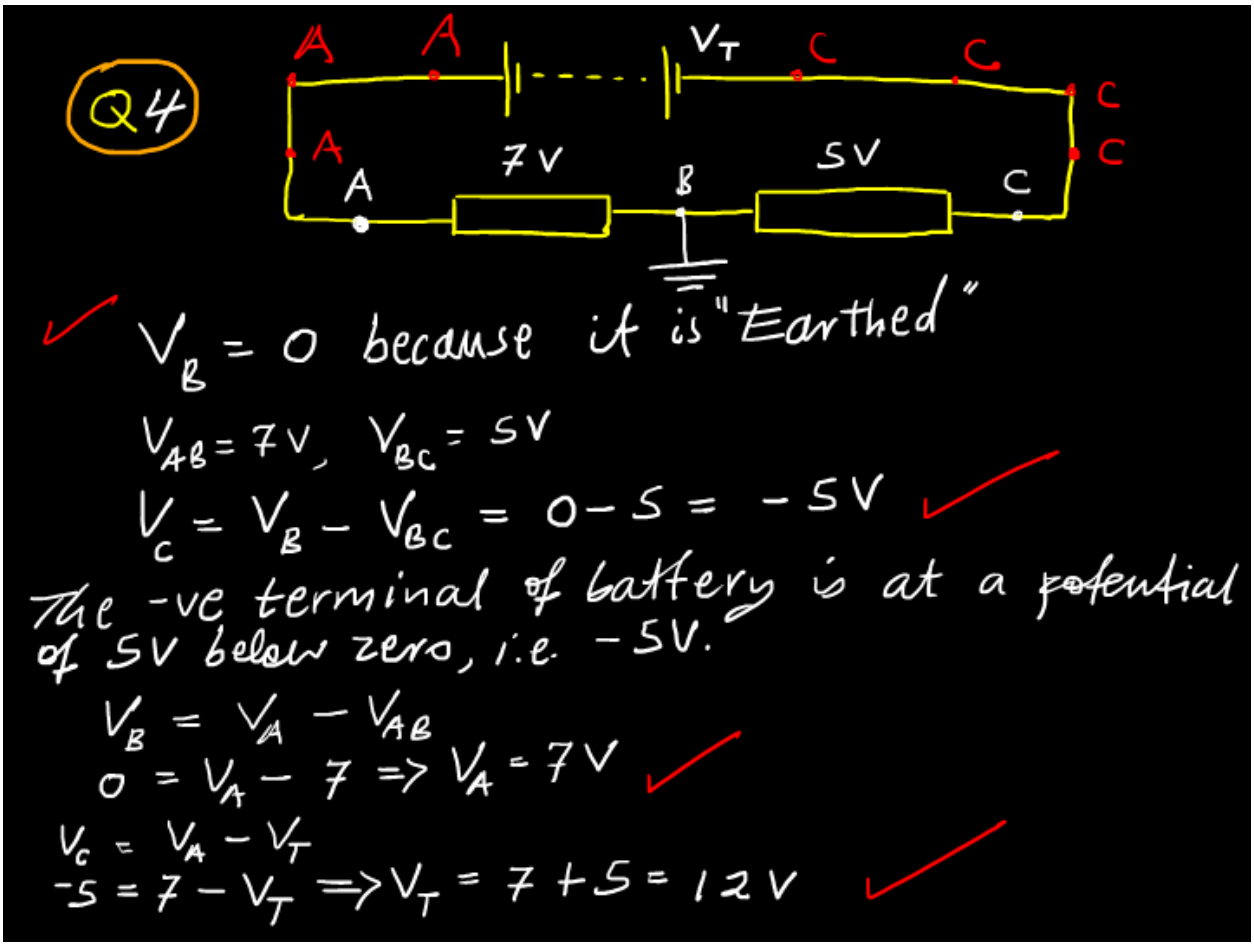
ANSWER TO Q3



GO BACK TO Q3

NEXT QUESTION

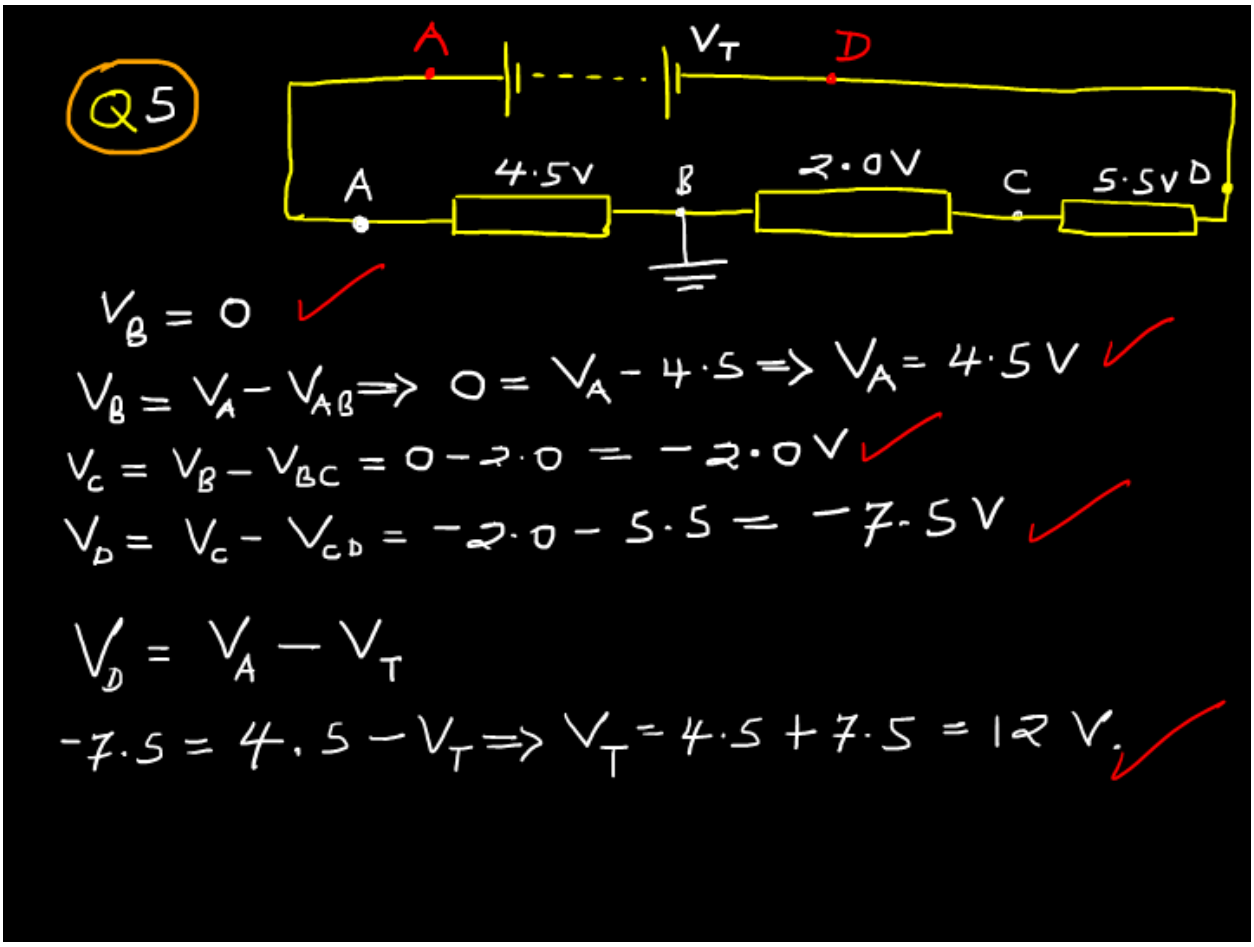
ANSWER TO Q4



GO BACK TO Q4

NEXT QUESTION

ANSWER TO Q5



GO BACK TO Q5