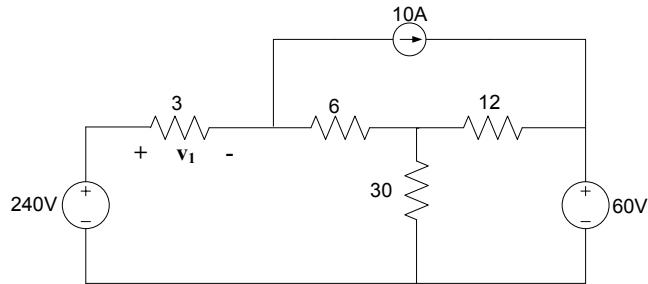


TOPIC

Electricity and Magnetism – Section XI – Question 9

QUESTION

The voltage v_1 in volts most nearly is



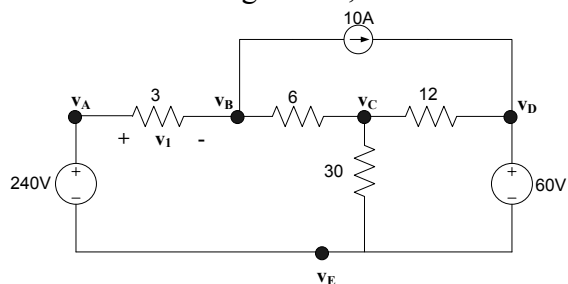
- (A) 58.50
- (B) 124.4
- (C) 181.5
- (D) 240.0

HINT

Kirchoff's current law (KCL) is a useful technique to calculate unknown currents. In addition KCL can be extended to what is known as *Nodal Analysis* to calculate nodal voltage in a circuit. There are three simple steps in performing nodal analysis;

1. Assign Nodal Voltages.

From the following circuit, 5 nodes show a system of 5 equations and 5 unknowns.



2. Pick a node and give it a known reference value. Keep things simple and make it a ground (zero volts).

CONTRIBUTOR

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