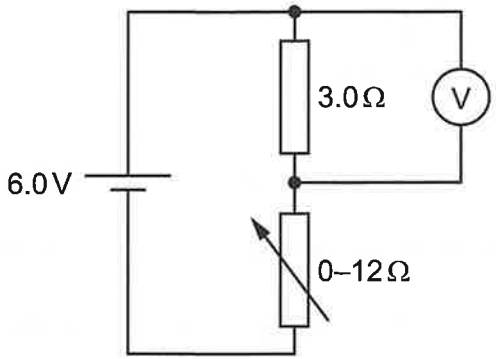
21 A 3.0 Ω resistor is placed in a potential divider circuit with a 0–12 Ω variable resistor and a 6.0 V supply. A voltmeter is attached across the 3.0 Ω resistor.



The resistance of the variable resistor is increased from 0 Ω to 12 Ω.

What happens to the reading on the voltmeter during this change?

A It decreases to 1.2 V.

B It decreases to 1.5 V.

C It increases to 4.5 V.

D It increases to 4.8 V.