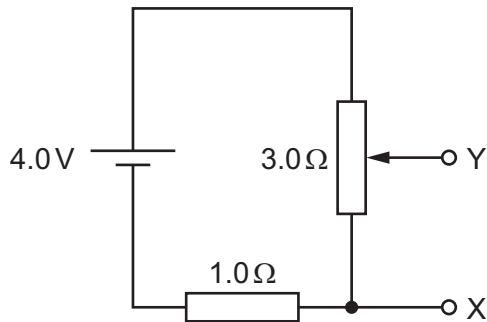


- 38** A cell of electromotive force (e.m.f.) 4.0 V and negligible internal resistance is connected to a fixed resistor of resistance $1.0\ \Omega$ and a potentiometer of maximum resistance $3.0\ \Omega$, as shown.



Which range of potential differences can be obtained between the terminals X and Y?

- A** 0 V to 3.0 V
- B** 0 V to 4.0 V
- C** 1.0 V to 3.0 V
- D** 1.0 V to 4.0 V