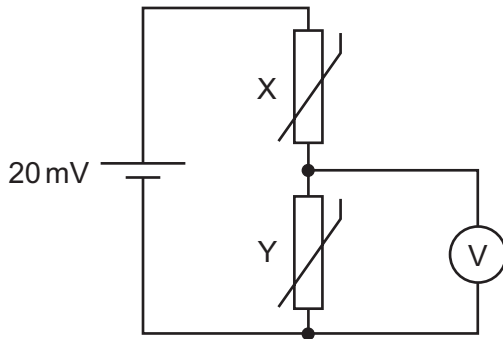


- 37** A potential divider circuit is designed to detect the difference in temperature between two different places.



The cell has electromotive force (e.m.f.) 20 mV and negligible internal resistance.

Initially, thermistors X and Y are at the same temperature and have the same resistance. The voltmeter reads 10 mV. X is then placed in a cold environment and its resistance doubles. Y is placed in a warm environment and its resistance halves.

What is the new reading on the voltmeter?

- A** 4 mV **B** 5 mV **C** 15 mV **D** 16 mV