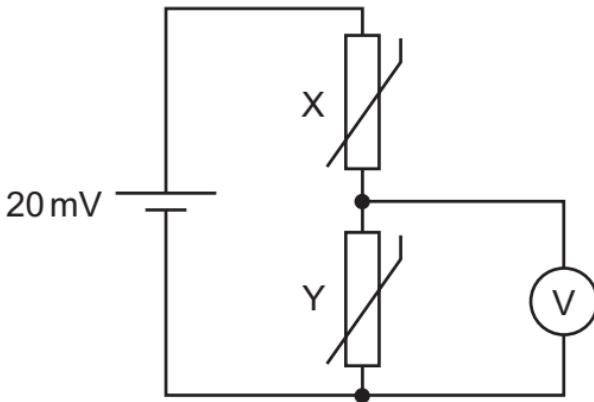


- 37 A potential divider circuit is designed to detect the difference in temperature between two different places.



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