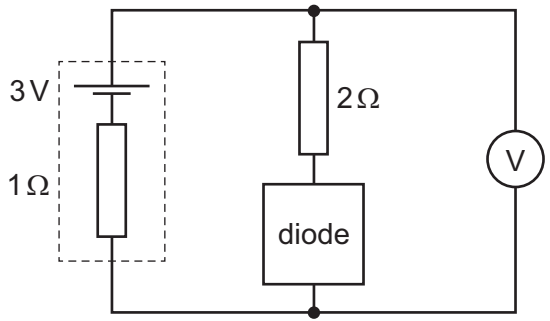
35 An ideal diode has zero resistance when forward biased and infinite resistance when reverse biased. The diode is connected in series with a 2 Ω resistor across the terminals of a source having electromotive force (e.m.f.) 3 V and internal resistance 1 Ω, as shown.



A high-resistance voltmeter is connected across the diode and resistor.

Which row gives the readings of the voltmeter for the two ways of connecting the diode?

	forward biased	reverse biased
A	1 V	3 V
B	2 V	0 V
C	2 V	3 V
D	3 V	0 V