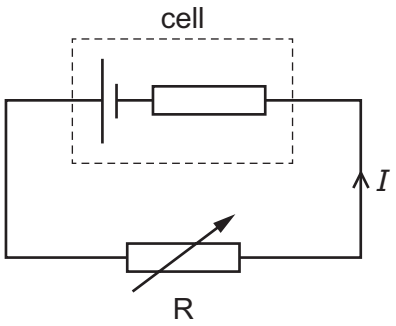
35 A cell with internal resistance is connected to a variable resistor R as shown.



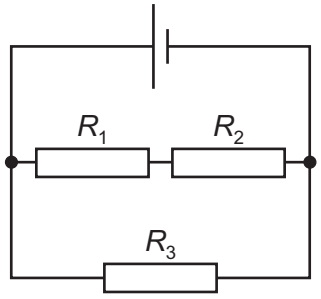
The resistance of R is gradually decreased.

How do the current I and the terminal potential difference (p.d.) across the cell change?

	current I	terminal p.d. across cell
A	decreases	decreases
B	decreases	increases
C	increases	decreases
D	increases	increases

36 The diagram shows a circuit with a cell and three resistors with resistances R_1, R_2 and R_3.

The cell has negligible internal resistance.



The total resistance of the circuit is R_T.

Which equation for R_T is correct?

A $R_T = R_1 + R_2 + R_3$

B $R_T = \frac{1}{R_1 + R_2} + \frac{1}{R_3}$

C $\frac{1}{R_T} = \frac{1}{R_1 + R_2 + R_3}$

D $\frac{1}{R_T} = \frac{1}{R_1 + R_2} + \frac{1}{R_3}$