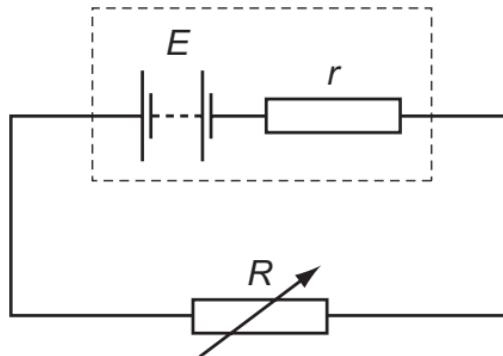


- 36 A battery with e.m.f. E and internal resistance r is connected in series with a variable external resistor.



The value of the external resistance R is slowly increased from zero.

Which statement is correct? (Ignore any temperature effects.)

- A The potential difference across the external resistance decreases.
- B The potential difference across the internal resistance increases.
- C The power dissipated in r increases and then decreases.
- D The power dissipated in R increases and then decreases.

- 37 A battery of electromotive force (e.m.f.) 6.0 V and negligible internal resistance is connected in