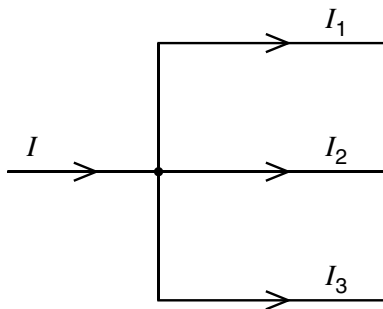


33 At a circuit junction, a current I divides into currents I_1 , I_2 and I_3 .



These currents are related by the equation

$$I = I_1 + I_2 + I_3.$$

Which law does this statement illustrate and on what principle is the law based?

- A** Kirchhoff's first law based on conservation of charge
- B** Kirchhoff's first law based on conservation of energy
- C** Kirchhoff's second law based on conservation of charge
- D** Kirchhoff's second law based on conservation of energy

34 The combined resistance R of two resistors of resistances R_1 and R_2 connected in parallel is