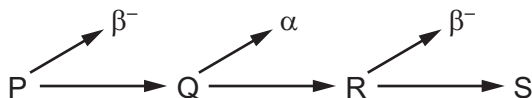


**40** In a radioactive decay series, three successive decays each result in a particle being emitted.

The first decay results in the emission of a  $\beta^-$  particle. The second decay results in the emission of an  $\alpha$  particle. The third decay results in the emission of another  $\beta^-$  particle.



Nuclides P and S are compared.

Which statement is correct?

- A** P and S are identical in all respects.
- B** P and S are isotopes of the same element.
- C** S is a different element of lower atomic number.
- D** S is a different element of reduced mass.

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