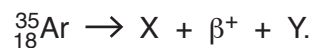


- 7 (a) The decay of a nucleus ${}^{35}_{18}\text{Ar}$ by β^+ emission is represented by



A nucleus X and two particles, β^+ and Y, are produced by the decay.

State:

- (i) the proton number and the nucleon number of nucleus X

proton number =

nucleon number =

[1]

- (ii) the name of the particle represented by the symbol Y.

..... [1]

- (b) A hadron consists of two down quarks and one strange quark.

Determine, in terms of the elementary charge e , the charge of this hadron.

charge = [2]

[Total: 4]