

39 The calcium nuclide  $^{42}_{20}\text{Ca}$  is formed by beta decay.

What are the nucleon (mass) number and proton (atomic) number of the unstable nuclide that underwent beta decay to form the calcium nuclide?

	nucleon number	proton number
A	41	19
B	41	21
C	42	19
D	42	21

40 When boron-11 ( $^{11}\text{B}$ ) is bombarded with  $\alpha$  particles, a new nucleus is formed and a neutron is