

3 A nucleus of element X emits an alpha particle to produce the nucleus ${}_{91}^{233}\text{Y}$.

Which of the following is the correct nucleon structure of element X?

- ☐ A 95 protons and 235 neutrons
- ☐ B 93 protons and 144 neutrons
- ☐ C 93 protons and 237 neutrons
- ☐ D 89 protons and 138 neutrons

(Total for Question 3 = 1 mark)