	Marks
• Consider the process of electron capture by the manganese-54 isotope.	**3**

Write a balanced nuclear formula.

In electron capture, a proton in the nucleus captures a core electron and is converted into a neutron. The atomic mass does not change but the atomic number decreases by 1:

$${}^{54}_{25}\text{Mn} + {}^{0}_{-1}\text{e} \rightarrow {}^{54}_{24}\text{Cr}$$