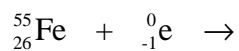
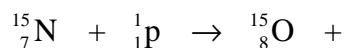


Marks
3

- Balance the following nuclear reactions by identifying the missing nuclear particle or nuclide.







- Calculate the atomic mass of lead from the isotope information provided.

2

Isotope	Mass of isotope (a.m.u.)	Relative abundance
${}^{204}\text{Pb}$	203.97304	1.40%
${}^{206}\text{Pb}$	205.97446	24.10%
${}^{207}\text{Pb}$	206.97589	22.10%
${}^{208}\text{Pb}$	207.97664	52.40%

Answer:

- Calculate the molar activity of ${}^{11}\text{C}$ (in curie), given its half-life of 20.3 minutes.

3

Answer: