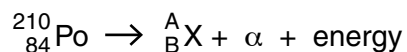


- 7 In the decay of a nucleus of $^{210}_{84}\text{Po}$, an α -particle is emitted with energy 5.3 MeV.

The emission is represented by the nuclear equation



- (a) (i) On Fig. 7.1, complete the number and name of the particle, or particles, represented by A and B in the nuclear equation.

| | number | name of particle or particles |
|---|--------|-------------------------------|
| A | | |
| B | | |

Fig. 7.1

[1]

- (ii) State the form of energy given to the α -particle in the decay of $^{210}_{84}\text{Po}$.

.....[1]

- (b) A sample of polonium $^{210}_{84}\text{Po}$ emits 7.1×10^{18} α -particles in one day.

Calculate the mean power output from the energy of the α -particles.

power = W [2]