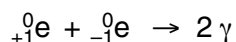


- 8 A positron (${}^0_{+1}\text{e}$) is a particle that has the same mass as an electron and has a charge of $+1.6 \times 10^{-19}\text{C}$.
A positron will interact with an electron to form two γ -ray photons.

For
Examiner's
Use



Assuming that the kinetic energy of the positron and the electron is negligible when they interact,

- (a) suggest why the two photons will move off in opposite directions with equal energies,

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..... [3]

- (b) calculate the energy, in MeV, of one of the γ -ray photons.

energy = MeV [3]