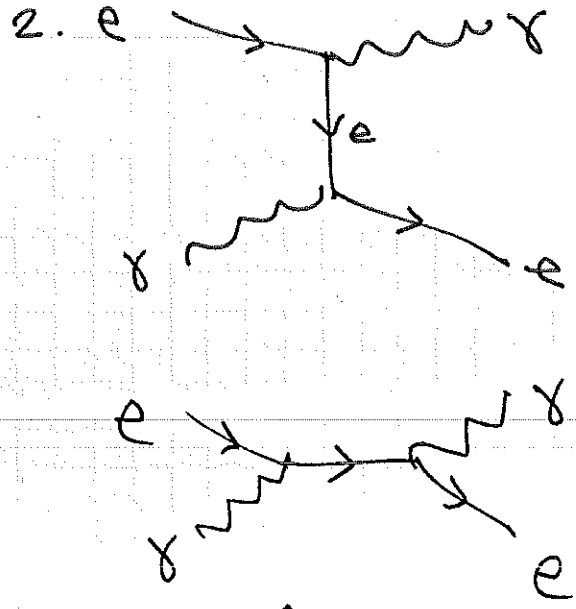
1.1 $m_p = \boxed{900\ \text{MeV}} = \boxed{2 \times 10^{-24}\ \text{kg}}$

1.2 $\frac{100\ \text{kg}}{m_p} = \boxed{5 \times 10^{28}}$ protons

↑ avg. American weighs the same as 5×10^{28} protons.

$5 \times 10^{28} \times 900\ \text{MeV} = \boxed{5 \times 10^{31}\ \text{MeV}}$

2.



↑ can you see why these are distinct?

you can also draw higher order diagrams...