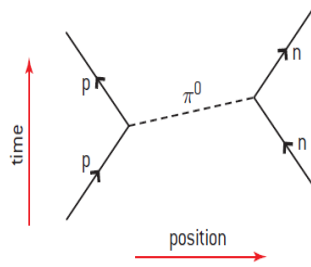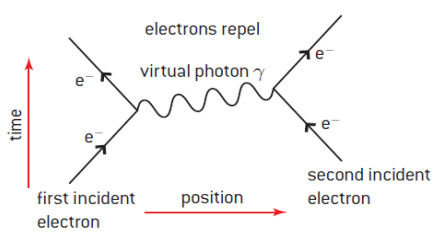Name_____
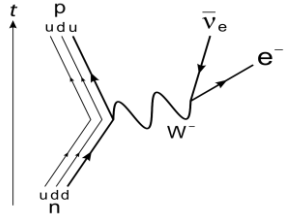
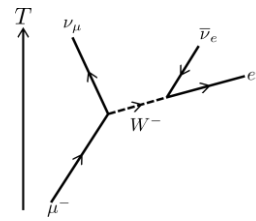Examples: (Read Oxford 300-302)

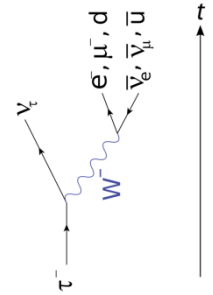Beta Decay   Beta Decay   Muon decay   Tau decay

Draw the following Feynman diagrams:

B⁻ decay: $n \rightarrow p + e^- + \bar{\upsilon}_e$	B+ decay: $p \rightarrow n + e^+ + \upsilon_e$
μ⁻ decay: $\mu^- \rightarrow \upsilon_\mu + e^- + \bar{\upsilon}_e$	μ⁺ decay: $\mu^+ \rightarrow \bar{\upsilon}_\mu + e^+ + \upsilon_e$

τ^- decay: $\tau^- \rightarrow \upsilon_\tau + \mu^- + \overline{\upsilon_\mu}$	τ^+ decay: $\tau^+ \rightarrow \overline{\upsilon_\tau} + \mu^+ + \upsilon_\mu$
Electron - electron collision: (Label the exchange particle)	Neutron proton Collision: (Label the exchange particle)
Proton electron collision: $p + e^- \rightarrow n + \upsilon_e$	Two types of Neutron electron Neutrino collisions: $n + \upsilon_e \rightarrow \upsilon_e + n$ and $n + \upsilon_e \rightarrow p + e^-$