

1. What is a Feynman diagram?
2. By what mechanism does particle physics account for the general idea of force between particles (in particular the action-at-a-distance)?
3. How does a PET scan work?
4. Draw a possible Feynman diagram for each of the following processes, based on the basic drawing rules for QED:
 - (a) An electron that splits into a photon and an electron, which then recombine to form just an electron again.
 - (b) An electron that scatters with a positron.