

Quiz 1

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- 1.1) Give values and units for α , $\hbar c$, and kT .
- 1.2) Name the fundamental forces and the corresponding intermediate bosons?
- 1.3) Calculate the range of the pion induced nucleon-nucleon force in nuclei.
Hint: $m_\pi = 140 \text{ MeV}/c^2$.
- 1.4) What are isobars, isotopes, and isotones?
- 1.5) What is the typical binding energy per nucleon in nuclei?
- 1.6) Name at least three of five terms contributing to the binding energy in the liquid drop (or Weizäcker) model.
- 1.7) Name the three effects that contribute to the interaction of photons with matter.
- 1.8) What is the typical specific energy loss of minimum ionizing particles?
- 1.9) How do you like quizzes?