

Answer on Question #66491 – Physics – **Molecular Physics – Thermodynamics**

Identify whether the following particles are leptons, baryons or mesons: μ , Λ , η^0 , π^0 , p , π^+ , ν_e , τ , Σ^+ , n .

Solution

Baryons are composite particles made of three quarks, as opposed to mesons, which are composite particles made of one quark and one antiquark

(https://en.wikipedia.org/wiki/List_of_baryons):

$$\Lambda, p, \Sigma^+, n.$$

Mesons are unstable subatomic particles composed of one quark and one antiquark

(https://en.wikipedia.org/wiki/List_of_mesons)

$$\eta^0, \pi^0, \pi^+.$$

A lepton is an elementary, half-integer spin (spin 1/2) particle that does not undergo strong interactions (<https://en.wikipedia.org/wiki/Lepton>)

$$\mu, \nu_e, \tau.$$

Answers: Baryons: Λ , p , Σ^+ , n .

Mesons: η^0 , π^0 , π^+ .

Leptons μ , ν_e , τ .

Answer provided by <https://www.AssignmentExpert.com>