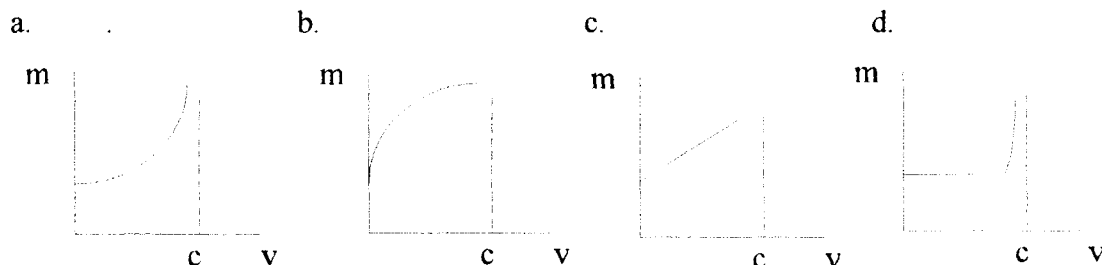SPH 4U1   Mass-Energy Equivalence

1.   The graph of mass versus speed for an object observed from another reference frame will
      look most like:
      a.   b.   c.   d.

2.   The mass of a particle moving past an observer with a speed of 2.9×10^8 m/s is measured
      by her to be 6.6×10^{-27} kg. The rest mass of the particle must be...

3.   A type of light known as a gamma ray can change into an electron and a positron when it
      passes near the nucleus of a heavy atom. The positron and electron produced each have
      the same rest mass of 9.1×10^{-31} kg. What is the minimum energy that a gamma ray must
      have to produce these two particles (answer in eV).