113. Suppose that the speed, v, of a particle of rest mass m increases so that v/c increases from $(1-10^{-5})$ to $(1-10^{-7})$. By what factor does its total energy increase, most nearly?

     a. $(1+10^{-7})$
     b. $(1+10^{-6})$.
     c. $(1+10^{-5})$
     d.   4.67
     e.   10
     f.   100
     g.   None of the above is within 10%.

114. A hypothetical balloon filled with an ideal gas has a volume of 10^3 liters at 27°C under one atmosphere of pressure. At what temperature, most nearly, will its volume be 330 liters under one atmosphere of pressure?

     a.   -273°C
     b.   -223°C
     c.   -173°C
     d.   -123°C
     e.   -73°C