1. Which of the following is considered to be TRUE regarding the evolution of eukaryotes?

   a. The last eukaryotic common ancestor (LECA) was anaerobic.
   b. The first eukaryotic common ancestor (FECA) had an endosymbiosis with a photosynthetic bacterium.
   c. The evolution of the endoplasmic reticulum is thought to have been a gradual process and not a result of endosymbiosis.
   d. The evolution of a membrane-bound nucleus occurred after ingestion of an aerobic prokaryote.

2. All of the following are evidence for the Endosymbiont Theory EXCEPT:

   a. The amoebozoa diverged from the LECA, whereas the archaeplastida (plants and algae) diverged from the FECA.
   b. Mitochondria and chloroplasts have their own circular genomes.
   c. Mitochondria and chloroplasts are able to do some of their own protein and DNA synthesis.
   d. Mitochondria and chloroplasts have a double membrane and the composition of these two membranes has been found to differ.

3. Which of the following CORRECTLY completes the following sentence?

   One clue that alternative splicing may play an important role in information flow within human cells was that…

   a. the human genome is much larger than the genomes of most simpler eukaryotes