Name **Part 2 Review Q**

Base your answers to questions **1** through **4** on the information below.

When an electron in an excited hydrogen atom falls from a higher to a lower energy level, a photon having a wavelength of 6.58×10^{-7} meter is emitted.

1. Is this photon an x-ray photon? Justify your answer.

2. Determine which *two* energy levels the electron has fallen between to emit this photon.

3. Convert the energy of the photon to electronvolts.

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4. Calculate the energy of a photon of this light wave in joules. [Show all calculations, including the equation and substitution with units.]

Base your answers to questions **5** through **7** on the information below.

A hydrogen atom emits a 2.55-electronvolt photon as its electron changes from one energy level to another.

5. Express the energy of the emitted photon in joules.
[Show all calculations including equations and substitutions with appropriate units.]

6. Using the Reference Tables for Physics, determine the energy level change for the electron.

7. Determine the frequency of the emitted photon.
   [Show all calculations, including the equation and the substitution with units.]