READING QUESTIONS 25 FEBRUARY

Hi Iva! I made another pass through page 55 and a first pass through page 56 (and a tiny bit of 57). I also began reading the division algebras section in parallel (I think I am eager to get to the punch line, is reading this part now a good idea? Not sure.) So, I also read page 59 and 60. Here are my questions:

(1) On page 60 under item number (3), Hatcher mentions that $K(S^{2k}) \approx \mathbb{Z}[\alpha]/(\alpha^2)$, and I am not sure why this is true. I believe theorem 2.2 on page 41 implies $K(S^{2k}) \approx \mathbb{Z}[H]/(H-1)^2$. Is it true that $\mathbb{Z}[\alpha]/(\alpha^2) \approx \mathbb{Z}[H]/(H-1)^2$ then? I would buy it, for isn't $\mathbb{Z}[x] = [x+1]$, so it is kind of just a change of variables?

(2) At the bottom of page 56, Hatcher suddenly introduces "$\widetilde{K}^*(X)$–modules". I suppose I now know what modules are, so that is good. I understand "$\widetilde{K}^*(X)$–modules" to mean that $\widetilde{K}^*(X)$ is the scalar ring that is now associated to the vector space. But, it seems that these "vector spaces" are $\widetilde{K}^*(A)$ and $\widetilde{K}^*(X, A)$, which seems strange. The top of page 57 explains how this is possible which I buy, but this simply feels like a strange construction. What is the purpose of introducing modules here? Perhaps I simply need to read more and answer this for myself.

(3) Not really a question, but I am still dijesting the proof of proposition 2.14. I believe I can understand it by myself, but perhaps it is something we could go over if we have the time.

That's it! It seems my questions are kind of minor this week. I wonder if that is a good or bad sign. Not sure.