

ASTR101 Week Quiz 07

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1. A

2. B

3. (a) I would go back to my high school. Because I was not brave enough to learn more advanced but difficult stuff during that period. I worked hard to learn something myself while taking the easier AP courses instead of real college level advanced Physics and Computer Science courses. This made me regretful now when I found that I really need to learn the harder materials to be better prepared in college.
- (b) I think it is mostly because of the great potential and mystery of black holes. People are always curious about something that is pretty unusual and extremely powerful, not to say it could be even useful (possibly) for not only professional scientists but normal people. Although it has small impact on Earth-focus astronomy,

it maybe has enormous impart on our human beings who willing to discover universe in the future. Black holes theoretically give us the possibility to do something "impossible" in the pass, like time traveling. So even I little step more we know about black holes, it is usually very attractive for both scientists and public.

4. No. Currently we know that Sun doesn't have a companion stars that it can take mass from and accumulate mass. After a long time, our sun will only have mass to become a white dwarf that is under $1.4 M_{sun}$ and no way to steal the mass from other to get massive enough for a white dwarf supernova.