The assigned reading this week is an article by Chandrasekhar (a famous astrophysicist, winner of the 1983 Nobel Prize alongside William Fowler for his work on the evolution of stars). The full article is worth your time, but if you are short on time you can pick one or two pages corresponding to the question(s) you found most interesting below.

**Required Reading Reflection Questions (everyone should answer both of these)**

1. There is much discussion about “Nature's beauty” as it appears in the physical sciences. What is one aspect or principle within the physical sciences that you personally find beautiful? For what reasons does the principle appeal to your own sense of beauty?
2. What is your conception of art, and how are mathematics and/or science forms of art? Even if you disagree, please discuss specific statements from the article and respond to them.

**Choose-Your-Own-Reflection Question (everyone should pick one page and answer the associated questions)**

* (p.25) Fry and Poincare: Do you agree with Poincare's statements about the “usefulness” of science? How is beauty the primary distinction between science and engineering? What do you make of Fry's statements about the inevitability of science versus art?
* (p.26) Ramanujan and Boltzmann: Chandrasekhar is very transparent in describing Ramanujan's knowledge of identities and formulas as intuitive, in the sense that he knew things unprovable at the time of his statement of them (p. 26). How do you explain this principle of intuition? Have you ever known others to think this way, or to claim this intuition? Have you ever experienced this sort of knowing?
* (p27-28) Einstein and Heisenberg: Einstein refers to the general theory relativity as “magic”. What is the general theory of relativity, and what do you think Einstein means by the term magic? What is your own experience with “feeling giddy” (Heisenberg) in relation to mathematical proofs or scientific formulas?
* (p27-28) Einstein and Heisenberg (pt 2): In Heisenberg's conversation with Einstein, the connection between truth and beauty is made. For Heisenberg, what is the determination of something being true? How does beauty come along truth and bear witness to its truthfulness? Do you agree with the statements made by Heisenberg
* (p.29-30) Einstein and the criteria of beauty: What do you think makes something in science beautiful? Do you agree with Chandrasekhar's criteria?