Lockhart's Lament - Math 317

Questions:

- Does Lockhart's view of mathematics (what mathematics is) surprise you? How?

- Why do I care about the difference between an integral and an antiderivative?

- Lockhart seems to bypass the question of real-world applications. Would an application-less mathematical education suffice for you? Why or why not? Why do you take mathematics?

- Has reading this inspired you to approach your mathematics classes any differently? How? (the kinds of questions you may ask or how you do homework or ...?)

What I take from it and want you to think about:

1) Mathematics is seen by many of its practitioners as an art, not a science or a skill. I would like to portray that, or make it possible for students to see how that may be so. I would like students to know that studying calculus is like studying great literature (in translation). (At the same time, mathematics is the basic language of science. Is there a contradiction here?)

2) Learning is not passive: sometimes you should trust your teachers, and sometimes you should be critical. You should take it upon yourself to learn more than the curriculum. You should talk to your teachers about your education. You should examine the future value of your present work.

3) Mathematical equations are not magic formulae. They are statements of truth whose beauty and interest lie in their logical justifications (proofs). Mathematics is poetry in the language of logic. Mathematics is also the exploration of an unknown world: one invents a world by imagining something (the triangle in the rectangle), and then one becomes the explorer of one's own invention.

4) Lockhart's Lament can be taken as inspiration for getting more from your education. (It need not be taken as motivation for dropping out of school!)