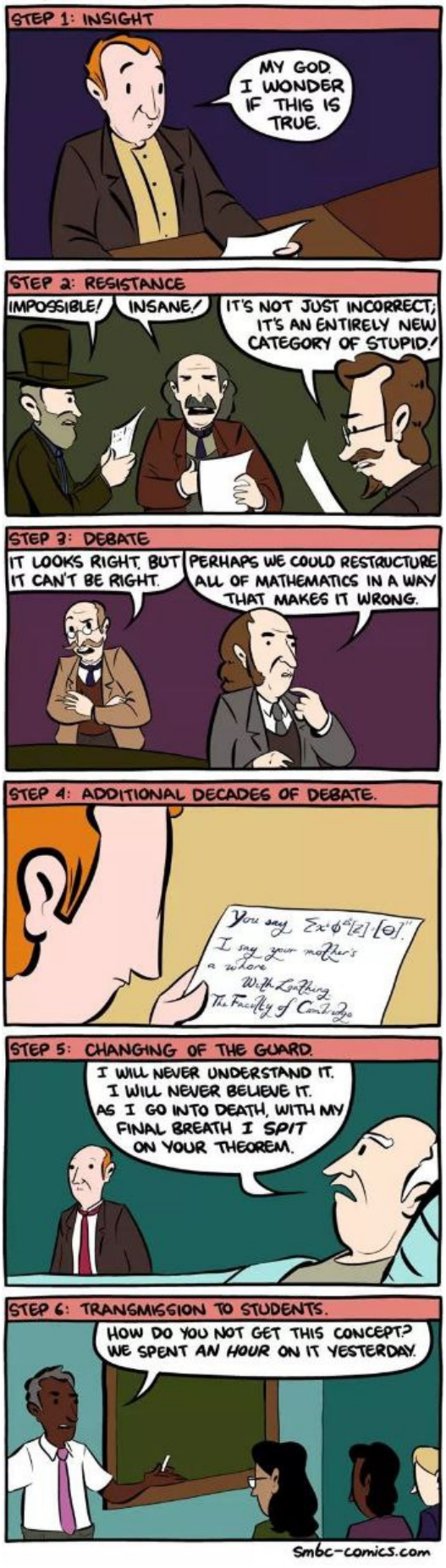
HOW MATH WORKS:



- Mathematics is not easy, understanding it just takes time. And this is true for everyone (including, of course, all your professors). Also, there is some sort of logarithmic growth: when starting to study math one also needs to figure out what it means to understand it, how to study it, and so on. So, don't get discouraged too easily (easier said than done, I know).

- Further, mathematical understanding is somewhat 'quantised' in the sense that a topic can jump from being totally obscure to completely clear in just a matter of seconds (Figure 1). However, the hours (days?) spent thinking about that totally obscure topic are the only way to get to the *Eureka!* moment (which can happen in the most random moments).
  Poincaré's description (see, *e.g.*, here) of how he got to the idea of automorphic functions is a famous example of this.

- When someone tells you that something is obvious (or trivial, clear, etc.), they do not mean that it should be obvious to you in that moment. They are inviting you to think at it until you also have the *Eureka!* moment and it becomes clear to you too.

- This also applies to books leaving proofs as exercises (even though, in this case there might be alternative explanations, Figure 2).

Figure 1: *Eureka!*

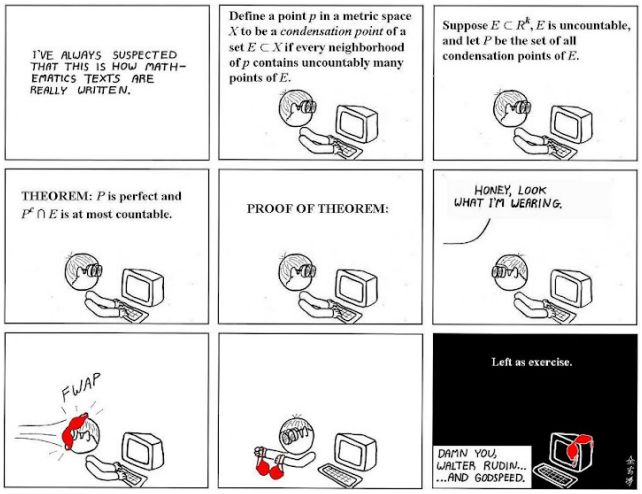


Figure 2: Left to the reader