3.1-2.3

Enlightening summary #1: Section 3.1 introduces us to Thales of Miletos and gives a broad overview of how Grecian mathematics was more abstract and rational than that of the Egyptians or Babylonians. The text mainly attributes this growth to a phenomenon called the "Greek Miracle" wherein the rapid expansion of the Greek empire, led to pluralism between the older Egyptian and Babylonian cultures which produced the majority of early greek mathematics.

Enlightening summary #2: Section 3.2 introduces us to Pythagoras and his school of followers. The text outlines their discovery of some number theory theorems, such as a closed form for a finite series of odd and even integers. Section 2.3 focuses on Pythagoras' solutions to the pythagoras equation, and the many ways incommensurable quantities were approximated.

Interesting: I was surprised at the way that Theon of Smyrna was able to approximate irrational numbers. The text gives a proof for why Theon's process converges to a value of $\sqrt{2}$ however it does not describe the motivation for his process, beyond labeling certain values as side and diagonal. I also really enjoyed the geometric argument that comes afterward from "Euclid's Elements" for why $\sqrt{2}$ is irrational. I also found Pythagoras' aversion to beans very intriguing.

Confusing: A lot of times the text continues an idea that the Greeks had, without clarifying if it was known in their time. This happens when it shows that Theon's process for approximating $\sqrt{2}$ applies to all irrationals of the form $\sqrt{a}$, $a \in \mathbb{N}$. The same thing is true for the proof of the sum of the first n^2 numbers. Also it seems like the Greeks were aware of various proof techniques, like contradiction, contrapositive, and induction but its not really discussed in the text.