In this talk, I will address a number of interesting features of the mathematical tables in Ptolemy’s *Almagest*. I will first discuss how they can be understood in terms of ideas related to mathematical functions, how they model geometric figures and allow a study of motion, and how they fit into the deductive framework of Ptolemy’s approach. Finally, I will make some remarks about the different function of tables in Ptolemy’s *Handy Tables*. (Received September 20, 2012)