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Few mathematical disciplines have been claimed to have begun in as many different times and places as trigonometry, covering one and a half millennia and three cultures. When applied to ancient mathematics, the boundaries of the discipline — even the meaning of the word — are obscure and open to different interpretations. The apparently safer ground of Hellenistic Greece is filled with claims and counter-claims of paternity, from Eudoxus to Hipparchus. Later developments are no clearer; spherical trigonometry may go back to Hipparchus, or only to Menelaus over two centuries later. The achievements of Claudius Ptolemy's *Almagest* are unquestioned, but what Ptolemy contributed (or merely borrowed) is another matter. Finally, the transmission of Greek astronomy to India opens up a series of questions about both cultures. We shall survey the evidence and arguments, with an eye toward establishing a conservative chronology of the subject. (Received September 27, 2005)