1112-01-18 Glen R Van Brummelen* (gvb@questu.ca), Quest University, 3200, Squamish, BC V8B 0N8, Canada. Al-Kashi's Two Methods for Finding sin 1°. Preliminary report.

Jamshīd al-Kāshī, an early 15th century astronomer and mathematical prodigy, solved the problem of finding $\sin 1^{\circ}$ twice: once early in his career in the $Kh\bar{a}q\bar{a}n\bar{\imath}$ $Z\bar{\imath}j$, and once late in life. The first solution followed traditional geometric methods, although reaching a level of precision unbeaten in pre-modern cultures; the second was algebraic and featured the use of an ingenious method related to fixed point iteration. We shall explore the changing disciplinary boundaries highlighted by these methods, note its impact in 18th-century India, and make parallels to similar developments in late 16th-century Europe. (Received May 25, 2015)