

1035-X1-1694 **Shahriar Shahriari*** (sshahriari@pomona.edu), Department of Mathematics, Pomona College,
610 N. College Ave., Claremont, CA 91711. *Abū'l Wafā and a Rusty Compass.*

It is well known that Abū'l Wafā Būzjānī (940–997 CE) systematically studied geometric constructions using a straightedge and a “rusty” compass—a compass with a fixed opening. We present a teaching module consisting of reading Abū'l Wafā's original constructions—in his own words but in translation—together with accompanying problems that lead the students through the material. We include in the module a discussion of the nineteenth century Poncelet-Steiner Theorem showing that all Euclidean ruler and compass constructions can be carried out using a ruler and a rusty compass. The module is suitable for high school and college geometry and history of mathematics classes. It can also be used to supplement an Abstract Algebra class. (Received September 20, 2007)