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Frank Sanacory* (sanacoryf@oldwestbury.edu), 223 Store Hill Road, Department of Mathematics & CIS, College at Old Westbury (SUNY), Old Westbury, NY 11568. *Introducing Number Theory in High Schools using Inquiry*. Preliminary report.

As mathematicians we are all familiar with definitions such as $a \approx b \pmod n \iff n|(b - a)$. How can students who are unfamiliar with the rigor of mathematics understand such definitions? Here we will explore a method of introducing number theory to high school students (currently in 10th and 11th grade). We build from the familiar clock math description of modular mathematics to exploring how to perform algebra on such a system. We end with the formal definitions (often suggested by the students). At the Institute for Creative Problem Solving we have used this method as the introduction to number theory for the students as well as an introduction to mathematical proof. (Received September 17, 2017)