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Patrick S Mitchell* (mitchellp@nexus.mwsu.edu), Patrick S. Mitchell, MWSU Department of Mathematics, 3410 Taft Blvd., Wichita Falls, TX 76308. *Number Theory and Mathematica*.

Number theory has several problems that are very easy to understand however very difficult to prove. With Mathematica we are able to have the students experiment with the problems and hopefully be able to either discover the theorem or at least numerically verify it. Sometimes when one is doing the numerical verification a general proof can surface. In this talk we will show how we introduce some theorems from elementary number theory and then present some experiments with some unproven conjectures. (Received September 12, 2000)