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**Samuel D Reed\*** (sdr4m@mtmail.mtsu.edu). *Can Turtles do Math? Exploring Different Number-Bases Through a Novel Task.*

Why are do we use base 10 in mathematics? This is a question that elementary preservice teachers often are not even aware of as they enter the university or teaching force. The Ninja Turtle Math problem was developed to give elementary preservice teachers a novel avenue in which to examine place value, discover, and reflect on the base 10 system they will eventually be teaching to youngsters. This was accomplished by having preservice teachers reflect on the nature of base 8 versus base 10. The Ninja Turtle problem was introduced to the preservice teachers in their first of two elementary mathematics content courses. This problem stemmed from my observations on preservice teachers' lack of understanding of place value, as well as their reluctance to think about the base 10 system deeply and consider the questions that their future pupils will likely be asking. This problem could also be extended to courses in discrete mathematics where other number systems are used and highlighted. This presentation will include a description of the problem, student work and reactions, as well as other possible extensions. (Received September 25, 2018)