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An Investigation of the Role of Friction in the Motion of a Tippe Top ELISABETH KAGER, CRAIG HOWALD, DENNIS KUHL, Marietta College — The time it takes a Tippe Top to turn over was measured as a function of friction. The reproducibility of the measured tipping time was also examined. Two experiments were conducted: One to measure a frictional figure of merit and the second to test the time it takes the Tippe Top to tip on three surfaces with varying friction. The three surfaces used were glass, Teflon, and Vinyl. Several runs of spinning Tippe Tops were recorded by means of a video camera. The data was analyzed by extracting the angular position and the angular velocity of the Tippe Top. By graphing the angular velocity vs. time and using the slope of the line, a frictional figure of merit was found. The time it took the Tippe Top to tip in each case was also determined.

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