1145-05-2357 **Therese Aglialoro** and **Robert Hochberg*** (`hochberg@udallas.edu`), 1845 E. Northgate Drive, Irving, TX 75062. *Snakes: Legal, Illegal and Dodecahedral.*

The Megaminx puzzle is a dodecahedral variant of the Rubik's cube. We characterize the snakes that can be obtained on the Megaminx puzzle, as well as those that cannot, unless one swaps two edges when nobody is looking, which we have done. The solution makes use of linear algebra, polygon geometry and group theory, all accessible to a bright undergraduate. (Received September 25, 2018)