

Problem \diamond -11

Due in DSC 222 by 12 noon, **Friday, April 5, 2019**

Problem: Mr Snail walks straightforward North for 2019 meters, then he turns right and walks straightforward East for 2018 meters. Then again he turns right and walks straightforward South for 2017 meters, to turn right and walk straightforward West for 2016 meters. Then he turns right and walks 2015 meters North etc etc etc until he walks just one meter South. How far from the starting point is he then?

RULES:

- The competition is open to all *undergraduate* UNO students and it is supervised by *Upper Curriculum Committee* of the Mathematics Department.
- Submit your solutions to Andrzej Rosłanowski in DSC 222 or to his mailbox.
- Every nontrivial step/claim in your solution must be justified. You may cite/quote a result from your textbook, past problems of the week and other widely available sources. In each case you have to give full reference.
- There are no partial credits, so rather err on the side of caution and provide more explanations than less. If you are not sure that your sources/references are appropriate, please include the complete relevant proofs from there.
- Your answers should be written clearly and legibly. We reserve the right to refuse grading your work if it is difficult to read it.
- The winners of Spring 2019 edition of POW will be determined at the end of the semester based on the number of correct solutions submitted.
- Problems will be posted by Friday 5pm and the solutions are due by the following Friday 12 noon.

PRIZES:

- Winners will receive books published by the American Mathematical Society. The titles actually awarded will be selected in cooperation with the awardees.
- Everybody scoring in the POW Competition qualifies for the grand finale:
 $\frac{\pi}{2}$ *Mathematical Competition.*