



PROBLEM OF THE WEEK #5
(Spring 2018)

The faces of n unit cubes have been painted either blue or orange independently at random, with blue and orange equally likely colors for each face.

What is the probability that these cubes can be lined up to make an “orange train” — a $1 \times 1 \times n$ box in which only orange faces are visible?

[Please fully explain your answer.]

Solutions should be submitted to Cinda Furry, in Gardner Hall 435, by 4:00 P.M. on Wednesday, February 28, 2018.