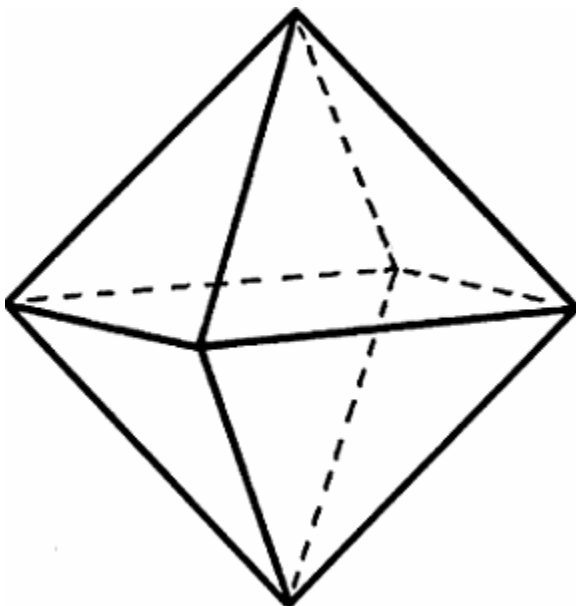


February 2025 Problem of the Month

A hungry mouse starts on the bottom of the octahedron shown. The mouse randomly chooses 1 of the 4 adjacent vertices and walks to it taking 1 hour. There is cheese at the top vertex. The mouse keeps going until it gets to the cheese.

- What is the probability that the mouse gets to the cheese within 3 hours?
- What is the probability that the mouse gets to the cheese within 8 hours?

Please email solutions to Dr London at slondon@luc.edu in PDF form by 11:59 pm on February 28. Please clearly state your name, whether you are an undergraduate, and your major on your solution. The solution with the best explanation from a Loyola undergraduate will be the winner. Other correct solutions or solutions with enough progress may be recognized too.



Preparing people to lead extraordinary lives