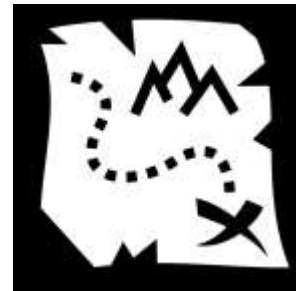


Problems of the Month

October 2016

General Problem:

You are going to travel to a destination in Little Rock that is 40 miles away. If you take highways you'll drive an average of 70 miles per hour. If you take back roads you'll drive an average of 45 miles an hour. Both routes are the same distance. How much time do you save by taking the highway?



Calculus Problem:

Calculate the following innocent-looking integral.

$$\int \sec(x) dx$$



Challenge Problem:

There are 100 boxes assigned to 100 students who are lined up to collect them. The first two students each take a random box, but every other student takes their assigned box if available and a random box otherwise. What is the probability that the last student will take her assigned box?