Problem of the Week
Problem D
Favourite Number 2

The *digit sum* of a positive integer is the sum of all its digits. For example, the digit sum of the integer 2345 is $2 + 3 + 4 + 5 = 14$.

Ayumi announced that her favourite number is a three-digit positive integer with a digit sum of 9. Vinnie then wrote down a three-digit positive integer with a digit sum of 9. What is the probability that the number Vinnie wrote was Ayumi's favourite number?