



## Problem of the Week

### Problem D

### Not So Random

Kimi created a digital die that can be controlled with a program. She then programmed it as follows.

- Initially it has the numbers 1, 2, 3, 4, 6, and 8 on its faces.
- If an odd number is rolled, all the odd numbers on the die double, but the even numbers remain the same.
- If an even number is rolled, all the even numbers on the die are halved, but the odd numbers remain the same.

Kimi rolls the die once and the numbers on the die change as described above. She then rolls the die again, but this time something goes wrong and none of the numbers change. What is the probability that she rolled a 2 on her second roll?

