Math 5710 Wednesday, 7/01/20 Quiz 08

1. What is your name?

2. Call to mind Sybil's dice-rolling experiment that is described in Item #5-E of our agenda for Meeting #6. Write a paragraph that explains either why or why not that Sybil's experiment produced random outcomes according to the following definition:

   032-A. Definition for *random outcome*: : The outcomes of Ω are *random* ⇔
   ($p \in$ { probability measures on Ω } ∧ ($p(\{ x \}) = p(\{ y \}) \forall\ x, y \in \Omega$))

Sample explanation:

Yes, Sybil's experiment produced random outcome according to our definition because of how she designed the sample space. She let Ω =
{ (1, 1), (1, 2), (1, 3), (1, 4), (1, 5), (1, 6), (2, 1), (2, 2), (2, 3), (2, 4), (2, 5), (2, 6), (3, 1), (3, 2), (3, 3), (3, 4), (3, 5), (3, 6), (4, 1), (4, 2), (4, 3), (4, 4), (4, 5), (4, 6), (5, 1), (5, 2), (5, 3), (5, 4), (5, 5), (5, 6), (6, 1), (6, 2), (6, 3), (6, 4), (6, 5), (6, 6) }

Each outcome in Ω has the probability of $\frac{1}{36}$ of occurring.

Thus, $p(\{ x \}) = p(\{ y \}) \forall\ x, y \in \Omega$

3. Smile.