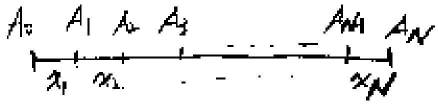
Since $P(n) \le P(n-1) + 2^{-101}$, $n > 100$

we have $P(n) \le \frac{1}{2^{100}} + 2^{-101} \cdot (n - 100)$

here $n = 60 \times 60 \times 24 \times 365 \times 100 < 2^{33}$

Therefore $P(n) \le \frac{1}{2^{100}} + 2^{-101} \cdot 2^{33} < 0.01\%$ $\boxed{\text{Yes!}}$

7. Solution:

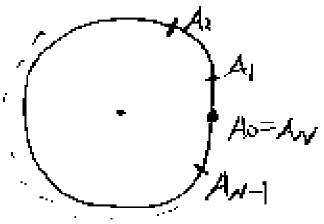


$x_1, x_2, \dots, x_N$ can form an N sided polygon

if and only if

$$(*)\quad \begin{array}{l} 0 \le x_1 < 1/2 \\ 0 \le x_2 < 1/2 \\ \vdots \\ 0 \le x_N < 1/2 \end{array} \quad \text{and} \quad x_1 + x_2 + \dots + x_N = 1$$

If we glue A_0 and A_N, then we have $(*)$ is false



if and only if $A_0 = A_N$, $A_1, A_2, \dots, A_{N-1}$ are on a semi-circle.

Hence, we only need to compute the probability that N points are on a semi-circle.

Note that $A_0, A_1, \dots, A_{N-1}$ are on a semi-circle if and only if starting at some A_i and look counter-clockwisely, $A_i, A_{i+1}, \dots, A_{i-1}$ are on a semi-circle.

Since $\mathbb{P}(\text{Start at } A_i, \text{ counter-clockwisely}, A_i, A_{i+1}, \dots, A_{i-1} \text{ on a semi-circle}) = (1/2)^{N-1}$

and these events for different i are mutually exclusive

Hence having N points on a semi-circle is with probability $\frac{N}{2^{N-1}}$.

Eventually the answer to our original problem is $\boxed{1 - \frac{N}{2^{N-1}}}$