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Department of Mathematics

**Solve It**

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**Problem.** For any given  $n \in \mathbb{N}$ , can we write  $n$ -consecutive natural numbers, none of which is a prime?

**Example.** For  $n = 5$ , the sequence 24, 25, 26, 27, 28 does not contain a prime number. For  $n = 8$ , the sequence 114, 115, 116, 117, 118, 119, 120, 121 works. What about  $n = 100$  or  $n = 1000000$ , more generally for arbitrary  $n \in \mathbb{N}$ ?