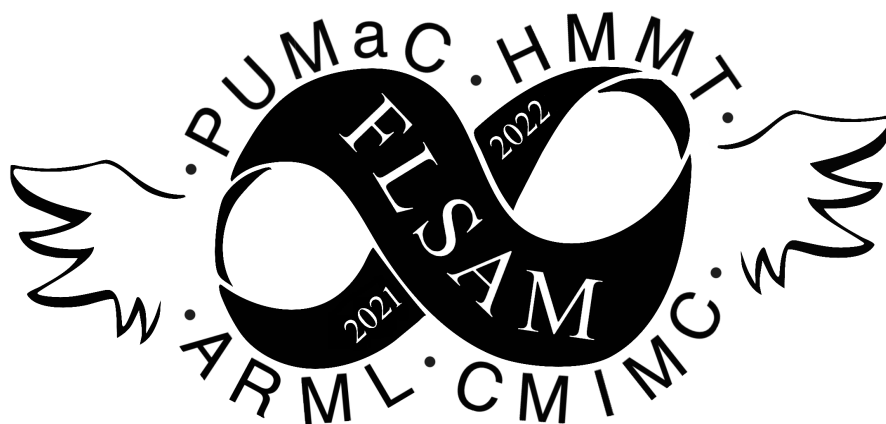# Florida Student Association of Mathematics



## 2022 ARML Tryout

## Set 2 of 7

Welcome to the **2022 FLSAM ARML Tryout!** The tryout will consist of **7 sets** of **2 problems each**. You will have **10 minutes** to work on each set. Write your name and answers directly on each problem set. Scoring is based on the number of correct answers; there is no penalty for wrong answers. Good luck!

**Round 2**                                      Name: _____

3. _____                                      4. _____

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**3.** Let $m$ and $n$ be distinct positive integers. The sum of the positive integer divisors of $m$ is equal to the sum of the positive integer divisors of $n$. Find the least possible value of $m + n$.

**4.** In right triangle $ABC$, we have $\angle B = 90°$ and $AB = BC = 4$. Let $D$ be a point on $AC$ such that $BD = 3$. Compute $AD^2 + CD^2$.