

The Ninth Annual

## Utah Math Olympiad

## Saturday, March 20, 2021 <br> 1:00-4:00 pm

Participation is free!
Prize money is available for the top scorers.
For more information and to register, visit www.utahmath.org. Registration ends March 13.
Contact us at contact@utahmath.org.

## Sample Problem

If $m$ and $n$ are integers, we say that $m$ covers $n$ if $m$ is a multiple of $n$. In particular, $m$ covers itself. Bonnie and Clyde play the following game.

Players alternate taking turns, with Bonnie taking the first turn. On her first turn, Bonnie names an integer from 1 to 10 inclusive. Thereafter, each player names another integer from 1 to 10 that is not covered by any previously named integer. When a player is unable to name such an integer, he or she loses the game.

If both Bonnie and Clyde play optimally, who wins the game? Describe the winning strategy for that player.

## Location:

Due to concerns over COVID-19, there will be no in-person locations this year.

Please go to our website for details on how to sign up with a proctor and take the UMO remotely.

