

# MATHCOUNTS® Problem of the Week Archive

## Brilliant Daily Challenges – November 28, 2022

### Problems

Our friends at Brilliant post fun, daily challenges on math, science and engineering topics every day. Try out a few of these challenges on their website by clicking the links below! If you do not yet have a Brilliant account, please go to [brilliant.org/educators](https://brilliant.org/educators) and apply for an educator account in order to access these daily challenges. (This is free to do, and you'll have access to the upcoming daily challenges once you have an account!)

#### Who Won the Race? (Easy)

We can sometimes use logic to stretch a little information a long way. Can these small clues tell us everything we need to know about who won this competition?

#### Make It Traceable (Medium)

In a tracing puzzle, you can't lift your writing tool or go over a segment more than once. Can you trace this entire figure without removing segments?

#### How Much Can They See? (Medium)


Art needs protecting and so art galleries need guards. How many does this one need?

#### Taking Their Time (Hard)

Different people work at different speeds. Can you infer how much time Robert will need to complete the task?

**Who Won the Race?**

How much information do you need to find the finish order of a three-person race? It turns out, **not much at all.**



Suppose that in a race among Amelia, Boris, and Carlos, we only know one fact — that Boris finished before Carlos. What are the possible orders for the entire race? Keep reading to see some reasoning we can use, or jump ahead to today's challenge for a trickier problem.