Problem of the Week
Problem A and Solution
Treasure Map

Problem
Robbie found a treasure map that contains a grid filled with numbers and letters.

The treasure hunt starts in the northwest corner of the grid, on the square that contains the number 10. The squares with numbers are used to determine which way to go, using the following rules.

- If the number is even and a multiple of 5, then move one square east.
- If the number is even, but not a multiple of 5, then move one square south.
- If the number is a multiple of 5, but not even, then move one square north.
- If the number is neither even nor a multiple of 5, then move one square west.

The squares with letters represent possible locations of the treasure. If Robbie follows the rules, he will follow a path that reaches a square with a letter, which is where the treasure is hidden. Where is the treasure hidden?

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Solution

Starting in the northwest corner of the map, here are the steps Robbie would follow to find the hidden treasure.

- 10 is an even number and a multiple of 5, so move one square east.
- 50 is an even number and a multiple of 5, so move one square east again.
- 24 is an even number but not a multiple of 5, so move one square south.
- 18 is an even number but not a multiple of 5, so move one square south again.
- 4 is an even number but not a multiple of 5, so move one square south again.
- 27 is neither even nor a multiple of 5, so move one square west.
- 32 is an even number but not a multiple of 5, so move one square south.
- 12 is an even number but not a multiple of 5, so move one square south again.
- 20 is an even number and a multiple of 5, so move one square east.
- 90 is an even number and a multiple of 5, so move one square east again.
- 5 is a multiple of 5 but not an even number, so move one square north.
- 60 is an even number and a multiple of 5, so move one square east.
- Robbie has reached a square with a letter, so the treasure is hidden in location G.

The path to the hidden treasure is shown on the map below.