

Warm-Up: The Painting

Prepared by Mark on January 23, 2025.

Instructor's Handout

This file contains solutions and notes.
Compile with the “nosolutions” flag before distributing.
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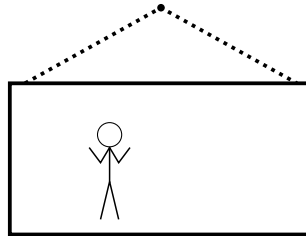
Problem 1:

You have a painting on a string.

Hang the painting on two nails so that if either is removed, the painting falls.

You may detach the string as you hang the painting, but it must be re-attached once you're done.

The solution to this problem isn't a “think outside the box” trick, it's a clever wrapping of the string.



Solution

Say we have a left nail and a right nail. The path of the string is as follows:

- Start on the left
- Move over both nails, wrap right nail cw
- Wrap left nail ccw
- Wrap right nail ccw
- Exit downwards, in between both nails