

Warm-Up: The Painting

Prepared by Mark on March 31, 2026

Instructor's Handout

This handout contains solutions and notes.

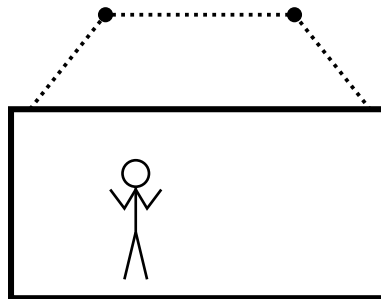
Recompile without solutions before distributing.

Problem 1:

Say we 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 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