

Problem for Week 7

You are locked in a room with dimensions $50 \times 50 \times 50$ feet. The room is sitting on top of stilts that are 100 feet tall. There is an open window in the room and near the window is a hook embedded in the floor. If you had a (nearly) 100 foot long rope you could attach it to the hook and use it to descend safely from the window. Two fifty foot ropes are hanging from the middle of the ceiling, where they are embedded with cement. They are one foot apart. You are expert at rope climbing and knot tying, and you have a sharp knife. You can survive a fall of up to about 10 feet.

How can you use the two ropes to escape safely to freedom through the window?