

## Platform Problem

You are on the first level of a platform, and you must get to the second level immediately.

On your left, there is a ladder leading to the second level that has rotten wood steps. There are 11 steps to the top, and each step fails 8% of the time when stepped on in this weathered condition. If the step breaks, so does your leg that's on it. These steps are too far apart to take more than one at a time. Although you can grab the sides of the ladder with your hands, you cannot climb up without using the steps.

To your right is a set of stairs that has 15 steps, each of which are even more weathered than the ladder. The steps are at such an incline that it is possible to skip over *one* of these steps to get to the next. The odd-numbered steps fail 10.5% of the time, and the even-numbered steps fail 12% of the time. As you may have guessed, if the step breaks, then so does your leg.

What is the best route to take to avoid breaking your leg? Show all work.