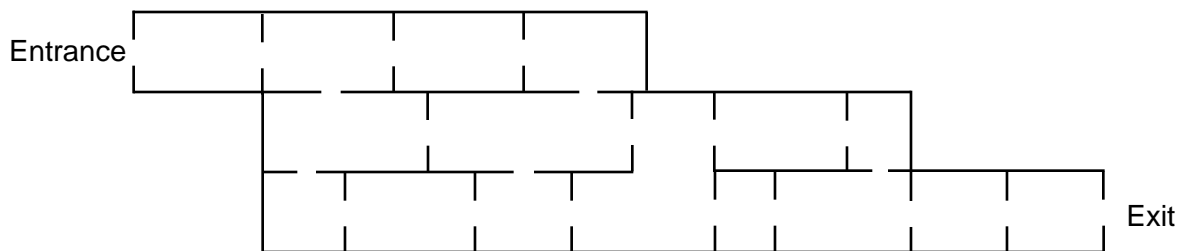


The Problem

Travis and Maria are avid spelunkers (cave explorers). Most of the caves they explore have many chambers with one, two, or more openings in and out of them. The cave they just entered is *very strange*. After they go through any opening, a boulder or pile of rocks falls into the opening, closing the pathway behind them. Travis and Maria are excellent spelunkers and can eventually find their way out of any room or chamber if all of the openings are not blocked. Determine whether it will be possible for them to escape the spooky cave shown or whether they will become trapped in one of the chambers.



Strategies and Hints

1. Look at a smaller problem. What if there are only one or two chambers in the cave?
2. Consider a variety of possible number of openings into each room.

Extensions

1. Make a general rule stating when a path always can or cannot be found through a cave.
2. Draw a new cave from which a person could always escape and another cave from which a person might not escape.