Consider the 10x10 grid-world **MDP** below:

- The **start** is the cell labelled *S* and the **goal** is the cell labelled *G*.
- In each cell the available **actions** are *l*, *u*, *r* and *d* (i.e. left, up, right and down) that move the agent one cell in the chosen direction. If an action would take the agent off the grid, then the agent stays in the current cell.
- The **reward** function is as follows: an action that would take the agent off the grid gets a -5 reward, an action that gets the agent to the goal state gets a 100 reward and otherwise an action that moves the agent one cell gets a -1 reward.
- The solid lines between cells are **barriers**: an action that would move the agent into a barrier leaves the agent in its current cell and gives a -5 reward.
- The dotted lines between cells are **partial barriers**: an agent can pass through a partial barrier but gets -3 reward.
- The states labelled ***a***, ***b*** and ***c*** are **teleport cells**. They act as follows:

    1. An action that would move the agent into cell ***a*** takes the agent to cell a_1 with probability 0.6 and to cell a_2 with probability 0.4.
    2. An action that would move the agent into cell ***b*** takes the agent to cell b_1 with probability 0.4 and to cell b_2 with probability 0.6.
    3. An action that would move the agent into cell ***c*** takes the agent to cell c_1 with probability 0.7 and to cell c_2 with probability 0.3.