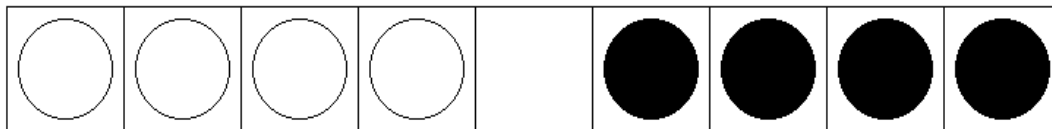
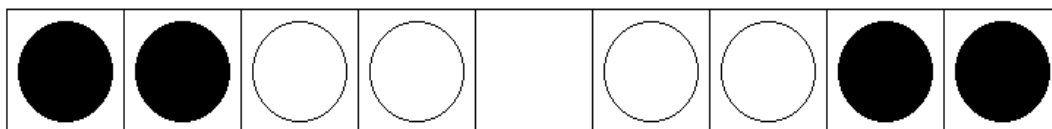


1. The puzzle below consists of 4 black tiles, 4 white tiles, and 1 empty space. A tile can move into the empty space with a cost of 1. A tile can jump over 1 or 2 tiles into the empty space with a cost equal to the number of tiles jumped. Shown below are the start and goal states. The position of the empty space is not a concern (in the goal state).



The Starting State



The Goal State

Given the problem, do the following.

- a. Formulate the problem as an uninformed search problem.
- b. Of the uninformed search methods presented in class, which would be the most appropriate to use?
- c. A\* and IDA\* are successful search algorithms; however, they both have at least one disadvantage associated with them. List one problem that a user may encounter when using a) A\* search and b) IDA\* search. How can one get around these problems?