1.

a.
```
bool pathway[8] = {[0]true, [2]true};
```

b.
```
bool pathway[8] = {true, false, true};
```

2.

My solution to solve the problem was to create an array to store which nodes have been visited already and also another array to store the distances from the index of the current node to its parent node's index. After that I create another array to store the nodes in the shortest path in order.

I learned here that it is really difficult to create a really optimized algorithm for this, I myself am not sure if my program is efficient at all, however, I got it to work somehow. It's also really difficult to make a solution to a problem you don't really understand, much less a readable program. I had a difficult time with this problem so I think my code is a bit hard to read.

I think the part in my code that determines the shortest path is a bit inefficient because I had to make two traversals of arrays just to print the nodes in the path but I do not know how to do it any other way.