DEPTH FIRST SEARCH WITH GØT

CASTLE BLACK

650

WINTERFELL

780

1300

IRON ISLANDS

1200

1800

1500

VALE OF ARRYN

730

830

CASTERLY ROCK

KING'S LANDING

690

250

HIGHGARDEN

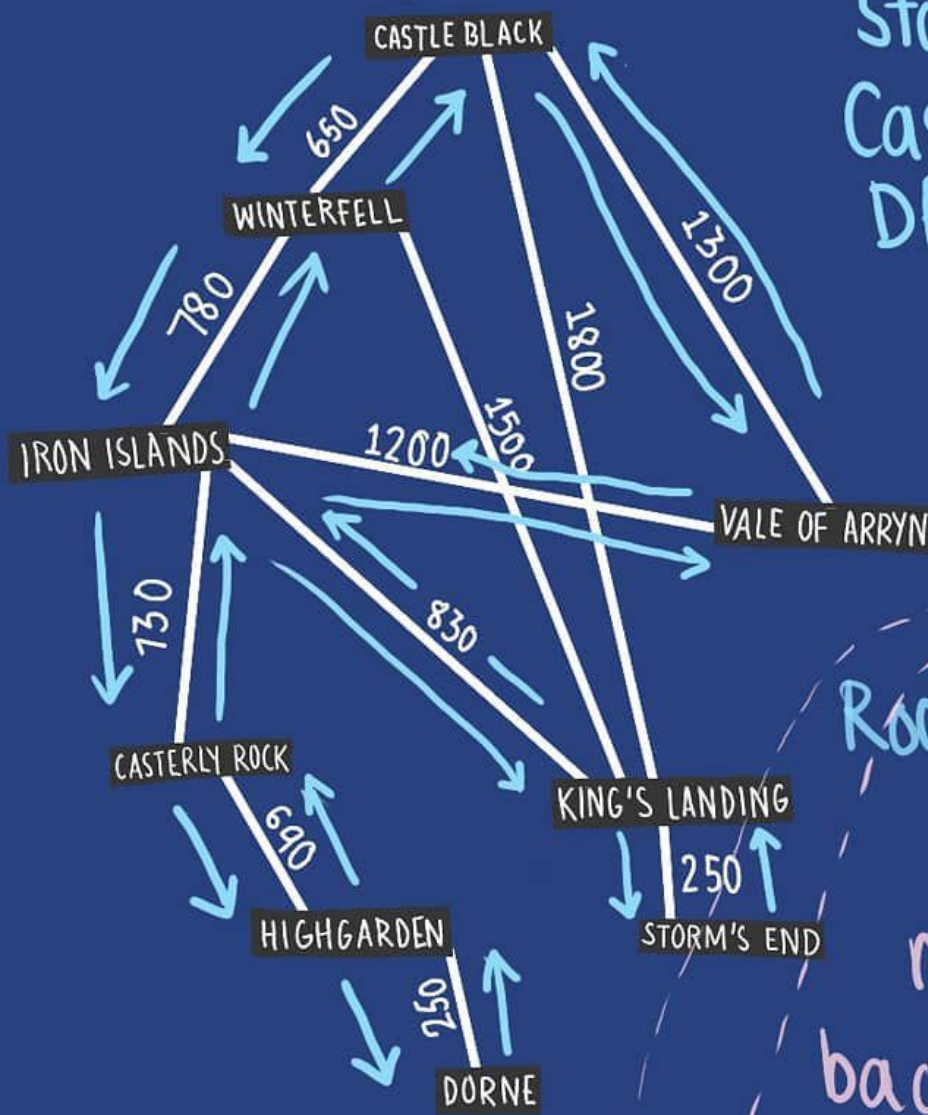STORM'S END

250

DORNE

THE CODE DOSE

DEPTH FIRST SEARCH

GRAPH TRAVERSAL

explore as far as possible along a path until there are no more nodes along the current path, then backtrack, i.e. move backwards to find new paths

Mark each node you travel to as visited to avoid moving in cycles

THE CODE DOSE

Graph diagram

Nodes: CASTLE BLACK, WINTERFELL, IRON ISLANDS, VALE OF ARRYN, CASTERLY ROCK, KING'S LANDING, HIGHGARDEN, STORM'S END, DORNE

Edge weights: 650, 780, 1300, 1800, 1500, 1200, 730, 830, 690, 250, 250

Starting from Castle Black, DFS of Westoros:

Castle Black → Winterfell → Iron Islands → Casterly Rock → Highgarden → Dorne (no more nodes so we backtrack to Iron Islands)

Iron Islands → King's Landing → Storm's End (again backtracking)

Iron Island → Vale of Arryn (now we won't go to Castle Black again because it is already visited)

THE CODE DOSE

1. Let S be a stack
2. Push starting node in S
3. While S is not empty, repeat the following
   a. Pop out the top node
   b. If it is unvisited, push it's neighbours into S then mark it as visited

THE CODE DOSE