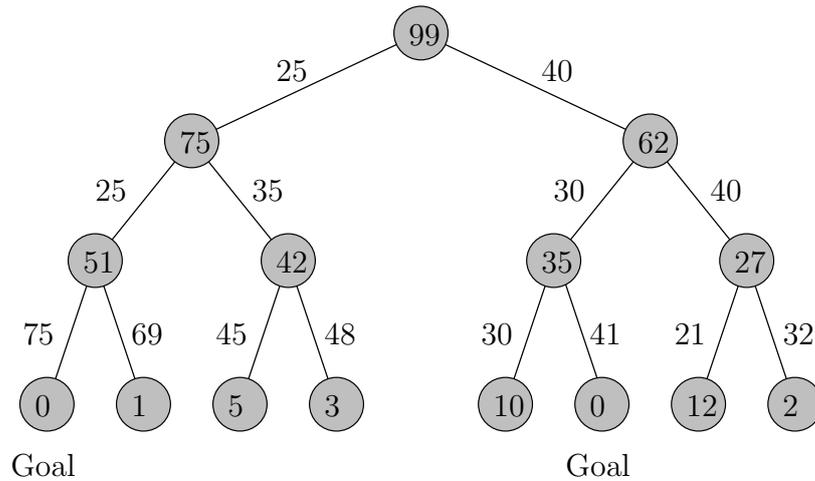


2 Artificial Intelligence I (SBH)

- (a) Provide a detailed description of the *Iterative Deepening A\** (*IDA\**) algorithm. Your answer should include a clear statement of the algorithm in pseudo-code, and a general description of how it works. [8 marks]
- (b) Explain how the *IDA\** algorithm searches the following search tree. Numbers between nodes denote the cost of the path between those nodes, and numbers on the nodes denote the value of the heuristic for that node. [8 marks]



- (c) Give *two* reasons why the *IDA\** algorithm might prove unsuitable as a solution to a search problem, in each case giving a brief explanation of why this is the case, and suggesting a potential solution. [4 marks]