CPSC 322, Practice Exercise
Heuristic Search

1 Directed Questions

- What is the distinction between informed and uninformed search?

- What is a heuristic?

- When is a heuristic admissible?

- A* can be seen as a combination of what two search strategies?

2 Heuristic Search

Consider the search problem represented in Figure **??**, where a is the start node and e is the goal node. The pair $[f, h]$ at each node indicates the value of the f and h functions for the path ending at that node. Given this information, what is the cost of each path? The cost $< a, c >= 2$ is given as a hint.

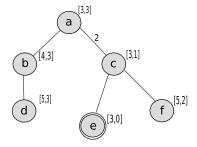Is the heuristic function h admissible? Explain why or why not.

Figure 1: Heuristic Search Problem

3 Learning Goals

You can:

- Construct admissible heuristics for appropriate problems. Verify heuristic dominance. Combine admissible heuristics.

- Define/read/write/trace/debug different search algorithms

  - With / Without Costs
  - Informed / Uninformed