## Heuristic function properties



Consider the state space graph shown above. A is the start state and $G$ is the goal state. The costs for each edge are shown on the graph. Each edge can be traversed in both directions. Complete the heuristic function $h$ shown below. All the values are fixed except $h(B)$.

| Node | A | B | C | D | E | F | G |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $h$ | 10 | $?$ | 9 | 7 | 1.5 | 4.5 | 0 |

For each of the following conditions, write the set of values that are possible for $h(B)$. For example, to denote all non-negative numbers, write $[0, \infty]$, to denote the empty set, write $\varnothing$, and so on.

1. What values of $h(B)$ make $h$ admissible?
2. What values of $h(B)$ make $h$ consistent?
