Problem Set 2 - Submission

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Question 5

(a)

Heuristic	Admissible	Consistent
h_1	Yes	Yes
h_2	Yes	No
h_3	Yes	Yes
h_4	Yes	No
h_5	No	No

(b) $S - A - B - G$

(c) I would use h_3 since it's consistent, so it guarantees to return optimal solution under graph search v3 and tree search, and $\forall n, h_3(n) > h_1(n) \Rightarrow h_3$ is more efficient than h_1.

(d) At $n = A$

$$h_6(n) = \max\{h_3(n), h_5(n)\} = \max\{3, 4\} = 4$$
$$h^*(n) = 3$$
$$\Rightarrow h_6(n) > h^*(n)$$
$$\Rightarrow h_6(n) \text{ is inadmissible}$$