find a goal n. This is often optimistic, underestimating but never overestimating.

b) Yes, h = 0 is admissible being less than h*(n), but is doesn't reveal any information about the goal.

c) No, if k is greater than 0 there will be some case that exists to make h(n) greater than h*(n).

d) The minimum of all three will always be underestimated, but the maximum has no guarantee that it will but underestimated unless all three are admissible.

2.

2.1) The code implements most of the states as integer variables representing each of the different states of the actors on both sides, as well as the boat itself. The search is implemented using breadth-first search.

3.

a) The letter variables are T,W,F,O,U,R.
We'll use the carry variables are c1, and c2.
Both T and F cannot be 0 as they are both leading digits.
W, O, U, R all range for {0,...,9}.
c1 and c2 have the range {0,1}.
Constraints:
All letter variables must be different.
The from the ones we get R = 0
The tens we get 2W = U + 10c1
The hundreds we get 2T + c1 = O + 10c2
And the thousands make F = c2, Where c2 has to equal 1 (F = 1)