

2) (10 pts) DSN (Binary Heaps)

A **mininum heap** is typically implemented with an array, with the root node (**minimum value**) being stored in index 1 of the array. To insert a new value into a heap, it's originally placed in the first open slot, followed by running a "percolate up" operation. Write a function that inserts a value into a heap in this manner. You may assume that the array is allocated to be big enough to store the newly inserted value. The function prototype is as follows:

```
void insert(int* heap, int curSize, int newVal);
```

`heap` is a pointer to an array which currently stores `curSize` number of values (but has room for at least 1 more). `newVal` is the new number to be inserted into the heap. Write this function which inserts the value `newVal` into this **minimum heap**. Take care to avoid infinite loops or array out of bounds issues. You may assume that index `curSize+1` is in bounds for the array `heap`. Also, remember that index 0 of the array `heap` is unused. **You may not write any helper functions.**

```
void insert(int* heap, int curSize, int newVal) {
```

```
}
```