For each question below, print the answer on the line provided. For this quiz, you can assume that the sizes of the data types (in bytes) are as follows: **char** = 1, **short** = 2, **int** = 4, **long** = 8, **float** = 4, **double** = 8. You may also assume that pointers are 8 bytes and all necessary header files have been included in the code snippets.

1. For each declaration below, write the English equivalent. If the declaration is illegal, write ILLEGAL. Then, draw the diagram that represents the symbol `foo`. Refer to the CS120 website for examples.

   a) `int (**foo)[5];` _____

   b) `int (*foo[5])(int);` _____

   c) `int *(*foo(int))[5];` _____

   d) `int ((*foo)(int))[5];` _____

   e) `int **foo[5];` _____

   f) `int *foo[5][5];` _____

2. For each English phrase below, write the corresponding C declaration.

   a) a pointer to a pointer to a function that takes a double and returns an int

   b) an array of 5 pointers to functions taking an int and returning a pointer to double

   c) a pointer to a function that takes an int and returns an array of 5 pointers to int

   d) a function that takes nothing and returns a pointer to an array of 5 pointers to char

   e) a function that takes a double and returns a pointer to an array of 5 floats

   f) a pointer to an array of 5 pointers to int

3. a) Create a structure called `Node` that will be used in a singly-linked list. It has two members, an integer named `number`, and a pointer named `next`, that is a pointer to a `Node` structure.

   b) Write a function named `AddToFront` that takes a pointer-to-a-pointer to a `Node` structure, and an integer, and adds a new node with the integer to the front of the list. This is the prototype:

   ```
   void AddToFront(struct Node **ppList, int value);
   ```

   Given a pointer to the first node in the list named `head`, this is how a user would call it to add a node with the value 10 in it:

   ```
   AddToFront(&head, 10);
   ```