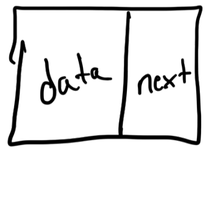
Question 4: Linked List

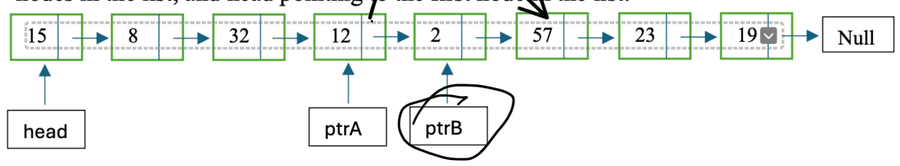
4. Linked List

For these questions, the data type 'node' refers to the type defined by the class

```
class node
{
    public:
        int data;
        node * next;
};
```



Consider the linked list below with node pointers ptrA and ptrB pointing to the specified nodes in the list, and head pointing to the first node in the list.

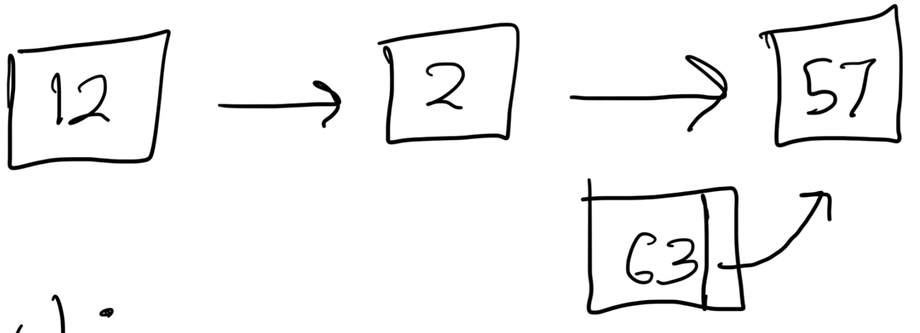


a. Assume the ptrB points to the node with 2 in the data field and ptrA points to the node previous to that node. What C++ statements would delete the node with 2 from the list. Be sure your code does not create a memory leak.

```
ptrA -> next = ptrB -> next;
delete ptrB;
```

b. Assume the ptrB points to the node with 2 in the data field and ptrA points to the node previous to that node. What C++ statements would create and insert a node containing 63 into the list after the node containing 2.

```
node* temp = new node();
temp -> data = 63;
temp -> next = ptrB -> next;
ptrB -> next = temp;
```



12, 63, 2, 57

12, 2, 63, 57