

Email:

Date:

Note!

- **To receive credit, you must show your work and steps for each problem.**
- **Provide explanation as required or as if you wish to.**
- **When asked, draw the correct map(s) or structure(s) and record the EXACT output for full credit.**
- **Put your name on all sheets.**

Reminder!

- ❖ **When writing code (even by hand), pay attention to syntax and statement completeness, and**
- ❖ **Be consistent when selecting names for functions and variables as well as styles and conventions**

Problem #1

Given the following declaration EXACTLY as they are, what may be the error(s)?

```
struct Fraction { // Your Comment
    int num;
    int denom;
};

struct FractionNode { // Your Comment
    struct Fraction data;
    struct FractionNode* next;
};

struct FractionList { // Your Comment
    struct Fraction* data;
    struct FractionNode* next;
};
```

Problem #2

The following declarations and definitions are used in the given functions and exercises.

```

///// Given Data Definitions /////

struct IntNode {
    int data;
    struct IntNode* next;
};

typedef struct IntNode* IntNodePtr;
typedef struct IntNode* IntList;

struct IntNodeAddress {
    IntNodePtr nodeAddress;
    struct IntNodeAddress* next;
};

struct Fraction {
    int num;
    int denom;
};

struct FractionNode {
    struct Fraction data;
    struct FractionNode* next;
};

typedef struct FractionNode* FractionNodePtr;
typedef struct FractionNode* FractionList;

```

What may be wrong/inappropriate with the function below? Provide your explanation.

```

int getIntMatchTest(IntList head, int target) {
    int counter = 0;

    while (head != 0) {
        if (head->data == target) {
            counter++;
        }
        head = head->next;
    }

    return counter;
}

```