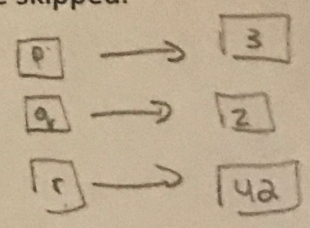
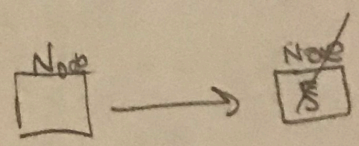
Review Activity 4

Linked Data Structures

1) Examine the following code fragment. For each line marked with the [Question*] tag, state what is the output, and briefly explain why that output occurs. If a line represents a compilation error, state that instead, and briefly explain why the error occurs. Assume that no lines will be skipped.




```
int* p = new int(3);
int* q = new int(2);
int* r = new int(42);
cout << *p << " and " << *q << endl; // [Question1]
cout << r << endl; // outputs 0x555111
cout << r + *q << endl; // [Question2]
cout << p + r << endl; // [Question3]
Node *node = new Node(5); // Node includes the data item of int type
delete node;
node = NULL;
cout << node->getData() << endl; //[Question4]
```



Output and Explanations:

[Question1]

3 and 2

[Question2]

= 0x555111 + (2)(4) - 4 byte)

= 0x555111 + 8 => 0x55519

[Question3]

Compilation error cannot add address together

[Question4]

Dereferencing a NULL pointer -> Error