

```

struct Node {
    int val;
    Node* next;
};

Node* llrec(Node* in1, Node* in2)
{
    if(in1 == nullptr) {
        return in2;
    }
    else if(in2 == nullptr) {
        return in1;
    }
    else {
        in1->next = llrec(in2, in1->next);
        return in1;
    }
}

```

a) $in1 = \{1, 2, 3, 4\}$
 $in2 = \{5, 6\}$

$llrec(*1, *5)$

$*1 \rightarrow next = llrec(*5, *2)$

$\hookrightarrow *5 \rightarrow next = llrec(*2, *6)$

$\hookrightarrow *2 \rightarrow next = llrec(*6, *3)$

$\hookrightarrow *6 \rightarrow next = llrec(*3, NULL)$

$\hookrightarrow return *3$

$returned_list = (1, 5, 2, 6, 3)$

b) The function should just return $in2$, which = 2

$returned_list = (2)$