Đã bắt đầu vào lúc	Thứ sáu, 23 Tháng chín 2022, 2:32 PM
Tình trạng	Đã hoàn thành
	Thứ sáu, 30 Tháng chín 2022, 10:45 AM
lúc	
Thời gian thực hiện	6 ngày 20 giờ

Chính xác

Điểm 1,00 của 1,00

Class LLNode is used to store a node in a singly linked list, described on the following:

```
class LLNode {
    public:
        int val;
        LLNode* next;
        LLNode();
        LLNode(int val, LLNode* next);
}
```

Where val is the value of node, next is the pointer to the next node.

Request: Implement function:

```
LLNode* addLinkedList(LLNode* 10, LLNode* 11);
```

Where 10, 11 are two linked lists represented positive integers, each node is a digit, the head is the least significant digit (the value of each node is between 0 and 9, the length of each linked list is between 0 and 100000). This function returns the linked list representing the sum of the two integers.

#### Example:

Given 10 = [2, 3] (representing 32) and 11 = [1, 8] (representing 81). The result would be 10 = [3, 1, 1] (representing 32 + 81 = 113).

#### Note:

In this exercise, the libraries iostream, string, cstring, climits, utility, vector, list, stack, queue, map, unordered\_map, set, unordered\_set, functional, algorithm has been included and namespace std are used. You can write helper functions and classes. Importing other libraries is allowed, but not encouraged, and may result in unexpected errors.

## For example:

Test	Result
int arr1[] = {2, 9};	[2, 4, 1
int arr2[] = {0, 5};	
<pre>LLNode* head1 = LLNode::createWithIterators(arr1, arr1 + sizeof(arr1) / sizeof(int));</pre>	
<pre>LLNode* head2 = LLNode::createWithIterators(arr2, arr2 + sizeof(arr2) / sizeof(int));</pre>	
<pre>LLNode* newhead = addLinkedList(head1, head2);</pre>	
LLNode::printList(newhead);	
head1->clear();	
head2->clear();	
<pre>newhead-&gt;clear();</pre>	

**Answer:** (penalty regime: 0, 0, 0, 5, 10, ... %)

```
1 → LLNode* addLinkedList(LLNode* 10, LLNode* 11) {
 2
        // STUDENT ANSWER
        if(l0==nullptr&&l1==nullptr){
 3
 4
            return nullptr;
 5
 6
        LLNode *ret=new LLNode;
 7
        LLNode *start= ret;
 8
        int nho=0;
 9
        while(10!=nullptr&&l1!=nullptr){
10
            //ret->next=new LLNode();
11
            //ret=ret->next;
12 •
            if(10->val+11->val+nho>=10){
                ret->val=(10->val+l1->val+nho)%10;
13
14
                nho=1;
15
            }
16
            else{
17
                 ret->val=(10->val+l1->val+nho)%10;
```

```
ıııı0=v;
ΔT
19
             10=10->next;
20
            l1=l1->next;
21
             if(10!=nullptr&&l1!=nullptr){
22 🔻
23
            ret->next=new LLNode();
24
            ret=ret->next;
25
26
        }
        while(l1!=nullptr){
27 •
28
            ret->next=new LLNode();
29
            ret=ret->next;
30
            ret->val=l1->val+nho;
31
            l1=l1->next;
32
            nho=0;
33
34 🔻
        while(10!=nullptr){
35
            ret->next=new LLNode();
36
            ret=ret->next;
37
            ret->val=10->val+nho;
            10=10->next;
38
39
            nho=0;
40
        }
41
             //cout<<nho<<endl;
        if(nho){
42
43
            ret->next=new LLNode();
            ret=ret->next;
44
45
            ret->val=nho;
46
        }
47
        //cout<<total<<endl;</pre>
48
49
        return start;
50
```

	Test	Expected	Got	
~	<pre>int arr1[] = {2, 9}; int arr2[] = {0, 5}; LLNode* head1 = LLNode::createWithIterators(arr1, arr1 + sizeof(arr1) / sizeof(int)); LLNode* head2 = LLNode::createWithIterators(arr2, arr2 + sizeof(arr2) / sizeof(int)); LLNode* newhead = addLinkedList(head1, head2); LLNode::printList(newhead); head1-&gt;clear(); head2-&gt;clear(); newhead-&gt;clear();</pre>	[2, 4, 1]	[2, 4, 1]	~

Passed all tests! ✓

Chính xác

Điểm 1.00 của 1.00

Polynomials is an important application of arrays and linked lists. A polynomial is composed of different terms where each of them holds a coefficient and an exponent. A polynomial p(x) is the expression in variable x which is in the form  $(a_nx^n + a_{n-1}x^{n-1} + .... + a_1x + a_0)$ , where  $a_n$ ,  $a_{n-1}$ , ....,  $a_0$  fall in the category of real numbers and 'n' is the non-negative integer, which is called the degree of polynomial.

Example:  $10x^2 + 26x$ , here 10 and 26 are coefficients and 2, 1 is its exponential value.

Points to keep in Mind while working with Polynomials:

- The sign of each coefficient and exponent is stored within the coefficient and the exponent itself.
- The storage allocation for each term in the polynomial must be done in descending order of their exponent.

In this question, complete SLinkedList class is included. You should use this class to complete your Polynomial class with initialized frame as following. This task is implement insertTerm to insert a term into a polynomial.

```
class Polynomial;
class Term {
private:
   double coeff;
    int exp;
   friend class Polynomial;
public:
    Term(double coeff = 0.0, int exp = 0) {
        this->coeff = coeff;
        this->exp = exp;
    }
   bool operator==(const Term& rhs) const {
        return this->coeff == rhs.coeff && this->exp == rhs.exp;
    }
    friend ostream & operator<<(ostream &os, const Term& term) {</pre>
        cout << endl;</pre>
        cout << "Term: " << "(" << term.coeff << " " << term.exp << ")";</pre>
        return os;
    }
};
class Polynomial {
private:
   SLinkedList<Term>* terms;
public:
    Polynomial() {
        this->terms = new SLinkedList<Term>();
    ~Polynomial() {
        this->terms->clear();
   void insertTerm(const Term& term);
    void insertTerm(double coeff, int exp);
    void print() {
        SLinkedList<Term>::Iterator it;
        cout << "[";
        for (it = this->terms->begin(); it != this->terms->end(); it++) {
            cout << (*it);
        cout << endl << "]";
    }
};
```

Test	Result
<pre>Polynomial *poly = new Polynomial();</pre>	С
<pre>poly-&gt;insertTerm(6.0, 2);</pre>	Term: (10 5)
<pre>poly-&gt;insertTerm(4.0, 5);</pre>	Term: (4 3)
<pre>poly-&gt;insertTerm(4.0, 3);</pre>	Term: (6 2)
<pre>poly-&gt;insertTerm(6.0, 5);</pre>	Term: (-1 0)
<pre>poly-&gt;insertTerm(-1.0, 0);</pre>	]
<pre>poly-&gt;insertTerm(-6.0, 6);</pre>	
<pre>poly-&gt;insertTerm(6.0, 6);</pre>	
<pre>poly-&gt;print();</pre>	
int n = 5;	[
int coeff[] = { 1, 2, 3, 4, 5 };	Term: (5 5)
int exp[] = { 1, 2, 3, 4, 5 };	Term: (4 4)
	Term: (3 3)
Polynomial p1;	Term: (2 2)
for (int i = 0; i < n; ++i)	Term: (1 1)
<pre>p1.insertTerm(coeff[i], exp[i]);</pre>	]
p1.print();	

**Answer:** (penalty regime: 0, 0, 0, 5, 10 %)

```
1 void Polynomial::insertTerm(const Term& term) {
 2
        // STUDENT ANSWER
 3
        insertTerm (term.coeff, term.exp);
 4
 5
    void Polynomial::insertTerm(double coeff, int exp) {
 6 ▼
        // STUDENT ANSWER
 7
 8
        Term* term = new Term(coeff,exp);
 9
        int index=0;
        if(terms->empty() && (*term).coeff!=0){
10
11
            terms->add(*term);
12
        else if((*term).coeff == 0){}
13
14
        else
15
16
            SLinkedList<Term>::Iterator it;
17
            int check =0;
18 •
            for(it= this->terms->begin(); it != this->terms->end(); it++){
19 •
                 if((*it).exp == (*term).exp){}
20
                     check =1;
21
                     break;
22 •
                 }else if((*it).exp < (*term).exp) {</pre>
                     check =2;
23
24
                     break;
25 🔻
                 }else{
26
                     index++;
27
28
             if(check ==1){
29 🔻
30 ▼
                 if((*it).coeff + (*term).coeff == 0){
31
                     terms->removeItem(*it);
32 •
                 } else{
                     (*it).coeff += (*term).coeff;
33
34
35 ▼
            } else if(check == 2){
36
                terms->add(index, (*term));
37 ▼
             } else if ((*term).exp >=0){
38
                 terms->add((*term));
39 ▼
             } else{
40
                 return;
41
42
        }
43
```

	Test	Expected	Got	
*	<pre>Polynomial *poly = new Polynomial(); poly-&gt;insertTerm(6.0, 2); poly-&gt;insertTerm(4.0, 5); poly-&gt;insertTerm(4.0, 3); poly-&gt;insertTerm(6.0, 5); poly-&gt;insertTerm(-1.0, 0); poly-&gt;insertTerm(-6.0, 6); poly-&gt;insertTerm(-6.0, 6); poly-&gt;insertTerm(6.0, 6); poly-&gt;print();</pre>	[ Term: (10 5) Term: (4 3) Term: (6 2) Term: (-1 0) ]	Term: (6 2)	*
~	<pre>int n = 5; int coeff[] = { 1, 2, 3, 4, 5 }; int exp[] = { 1, 2, 3, 4, 5 };  Polynomial p1; for (int i = 0; i &lt; n; ++i)     p1.insertTerm(coeff[i], exp[i]);  p1.print();</pre>	[ Term: (5 5) Term: (4 4) Term: (3 3) Term: (2 2) Term: (1 1) ]	Term: (3 3)	<b>~</b>

Passed all tests! 🗸

Chính xác Điểm cho bài nộp này: 1,00/1,00.

Chính xác

Điểm 1,00 của 1,00

Implement Iterator class in class SLinkedList.

<u>Note</u>: Iterator is a concept of repetitive elements on sequence structures. Iterator is implemented in class vector, list in STL container in C++ (<a href="https://www.geeksforgeeks.org/iterators-c-stl/">https://www.geeksforgeeks.org/iterators-c-stl/</a>). Your task is to implement the simple same class with iterator in C++ STL container.

Please read example and testcase carefully.

```
template <class T>
class SLinkedList
public:
    class Iterator; //forward declaration
    class Node;
                    //forward declaration
protected:
    Node *head;
    Node *tail;
    int count;
public:
    {\sf SLinkedList(): head(NULL), tail(NULL), count(0)\{\};}\\
    ~SLinkedList();
    void add(const T &e);
    void add(int index, const T &e);
    T removeAt(int index);
    bool removeItem(const T &removeItem);
    bool empty();
    int size();
    void clear();
    T get(int index);
    void set(int index, const T &e);
    int indexOf(const T &item);
    bool contains(const T &item);
    string toString();
    SLinkedList(const SLinkedList &list)
        this->count = 0;
        this->head = NULL;
        this->tail = NULL;
    }
    Iterator begin()
        return Iterator(this, true);
    }
    Iterator end()
        return Iterator(this, false);
    }
public:
    class Node
    {
    private:
        T data;
        Node *next;
        friend class SLinkedList<T>;
    public:
        Node()
        {
            next = 0;
        }
        Node(Node *next)
            this->next = next;
        }
        Node(T data, Node *next = NULL)
            this->data = data;
            this->next = next;
        }
    };
    class Iterator
    private:
        SLinkedList<T> *pList;
        Node *current;
        int index; // corresponding with current node
```

```
public:
    Iterator(SLinkedList<T> *pList, bool begin);
    Iterator & operator=(const Iterator & iterator);
    void set(const T & e);
    T & operator*();
    bool operator!=(const Iterator & iterator);

    // Prefix ++ overload
    Iterator & operator++();

    // Postfix ++ overload
    Iterator operator++(int);
};
```

#### For example:

```
Test
                                                   Result
SLinkedList<int> list;
int size = 10;
for(int idx=0; idx < size; idx++){</pre>
    list.add(idx);
SLinkedList<int>::Iterator it;
int expvalue = 0;
for(it = list.begin(); it != list.end(); it++){
    assert(*it == expvalue);
    expvalue += 1;
}
SLinkedList<int> list;
int size = 10;
for(int idx=0; idx < size; idx++){</pre>
    list.add(idx);
SLinkedList<int>::Iterator it;
int expvalue = 0;
for(it = list.begin(); it != list.end(); ++it){
    assert(*it == expvalue);
    expvalue += 1;
}
```

**Answer:** (penalty regime: 0, 0, 0, 5, 10 %)

```
template <class T>
 2
   | SLinkedList<T>::Iterator::Iterator(SLinkedList<T>* pList, bool begin)
 3 ▼ {
 4
        this->pList = pList;
 5
        if (begin == true)
 6
        {
 7
            if (this->pList != nullptr)
 8 ,
            {
 9
                 this->current = pList->head;
10
                 this->index = 0;
11
            }
            else
12
13
             {
14
                 this->current = nullptr;
15
                 this->index = -1;
16
            }
17
        }
18
        else
```

```
20
            this->current = nullptr;
            this->index = (pList != nullptr? pList->size() : 0);
21
22
        }
23
24
            Constructor of iterator
25
            * Set pList to pList
            * begin = true:
26
             * * Set current (index = 0) to pList's head if pList is not NULL
27
            * * Otherwise set to NULL (index = -1)
28
29
             * begin = false:
30
             * * Always set current to NULL
31
             * * Set index to pList's size if pList is not NULL, otherwise 0
32
33
34
    template <class T>
36
    typename SLinkedList<T>::Iterator& SLinkedList<T>::Iterator::operator=(const Iterator& iterator)
37 ▼
38
        this->current = iterator.current;
39
        this->index = iterator.index;
40
        this->pList = iterator.pList;
41
        return *this;
42
43
            Assignment operator
44
             * Set this current, index, pList to iterator corresponding elements.
45
46
    }
47
48
    template <class T>
49
    void SLinkedList<T>::Iterator::remove()
50 ▼
   {
51
        if (current == nullptr)
52
        {
            throw std::out_of_range("Segmentation fault!");
53
54
55
        pList->removeAt(index);
56
        index -= 1;
57
        if (index == -1)
58
        {
59
            current = nullptr;
60
        }
61
        else
62
        {
63
            int i = 0;
64
            Node* x = pList->head;
65
            while (x != nullptr)
66
                 if (i == index)
67
68
                 {
69
                     break;
70
                 }
71
                 i++;
72
                 x = x->next;
73
74
            current = x;
75
76
            Remove a node which is pointed by current
77
78
            * After remove current points to the previous node of this position (or node with index - 1)
            st If remove at front, current points to previous "node" of head (current = NULL, index = -1)
79
80
             * Exception: throw std::out_of_range("Segmentation fault!") if remove when current is NULL
81
82
    }
84
    template <class T>
85
   void SLinkedList<T>::Iterator::set(const T& e)
86 🔻
87
        if (current == nullptr)
88
        {
89
            throw std::out_of_range("Segmentation fault!");
90
        current->data = e;
```

```
J 4
 93
             Set the new value for current node
              * Exception: throw std::out_of_range("Segmentation fault!") if current is NULL
 94
 95
 96
     }
 97
 98
     template <class T>
    T& SLinkedList<T>::Iterator::operator*()
 99
100 ▼ {
101
         if (current == nullptr)
102
         {
             throw std::out_of_range("Segmentation fault!");
103
104
         }
105
         return current->data;
106
107
             Get data stored in current node
108
              * Exception: throw std::out_of_range("Segmentation fault!") if current is NULL
109
110
111
112
     template <class T>
113
     bool SLinkedList<T>::Iterator::operator!=(const Iterator& iterator)
114 •
     {
115
         return (current == iterator.current && index == iterator.index? false : true);
116
         /*
117
             Operator not equals
118
119
              * Returns false if two iterators points the same node and index
120
121
     // Prefix ++ overload
122
123
     template <class T>
124
     typename SLinkedList<T>::Iterator& SLinkedList<T>::Iterator::operator++()
125 •
126
         if (index == pList->size())
127
         {
             throw std::out_of_range("Segmentation fault!");
128
129
         }
130
         index++;
         if (index == 0)
131
132
         {
133
             current = pList->head;
134
         }
135
         else
136
         {
137
             current = current->next;
138
         return *this;
139
140
             Prefix ++ overload
141
142
             * Set current to the next node
             * If iterator corresponds to the previous "node" of head, set it to head
143
144
              * Exception: throw std::out_of_range("Segmentation fault!") if iterator corresponds to the end
145
146
147
     // Postfix ++ overload
148
     template <class T>
149
     typename SLinkedList<T>::Iterator SLinkedList<T>::Iterator::operator++(int)
150
151
         if (index == pList->size())
152
         {
             throw std::out_of_range("Segmentation fault!");
153
154
155
         Iterator temp = *this;
         ++*this;
156
157
         return temp;
158
159
             Postfix ++ overload
160
              * Set current to the next node
161
              * If iterator corresponds to the previous "node" of head, set it to head
              * Exception: throw std::out_of_range("Segmentation fault!") if iterator corresponds to the end
162
163
```

```
Test
SLinkedList<int> list;
int size = 10;
for(int idx=0; idx < size; idx++){</pre>
    list.add(idx);
SLinkedList<int>::Iterator it;
int expvalue = 0;
for(it = list.begin(); it != list.end(); it++){
    assert(*it == expvalue);
    expvalue += 1;
}
SLinkedList<int> list;
int size = 10;
for(int idx=0; idx < size; idx++){</pre>
    list.add(idx);
SLinkedList<int>::Iterator it;
int expvalue = 0;
for(it = list.begin(); it != list.end(); ++it){
    assert(*it == expvalue);
    expvalue += 1;
}
```

# Passed all tests! ✓

Chính xác

Điểm 1,00 của 1,00

Class LinkedList is used to represent single linked list, described as the following:

```
class LinkedList {
  public:
     class Node;
  private:
     Node* head;
     Node* tail;
     int size;
  public:
     class Node {
        private:
          int value;
          Node* next;
          friend class LinkedList;
        public:
          Node() {
             this->next = NULL;
          }
          Node(Node* node) {
             this->value = node->value;
             this->next = node->next;
          Node(int value, Node* next = NULL) {
             this->value = value;
             this->next = next;
          }
     };
     LinkedList(): head(NULL), tail(NULL), size(0) {};
     void partition(int k);
};
```

In this class; head, tail and size are the pointers of the first element, the last element and size of linked list.

#### Request: Implement function

```
void LinkedList::partition(int k);
```

To rearrange elements in this linked list by this way: split all elements of this linked list to 3 groups include: group I (the value of each element is smaller than k), group II (the value of each element is equal to k) and group III (the value of each element is larger than k); after that, move group I to the head of linked list, group II is after group I and group III is after group II. Note that the orders of the elements of each group are unchanged.

#### Example:

```
- The given linked list: 10->55->45->42->50
- k=45
```

In this case, group I includes elements with value 10 and 42, group II includes elements with 45 and group III includes elements with value 55 and 50. Rearrange by above way, this linked list will become 10->42->45->55->50 (the orders of th elements in each group is unchanged: 10 before 42 and 55 before 50).

Note: In this exercise, libraries iostream, sstream and using namespace std; have been used. You can add other functions for your answer, but you are not allowed to add other libraries.

Test	Result
<pre>LinkedList* 11 = new LinkedList();</pre>	[20,30,10,40,45,60,55]
l1->add(20); l1->add(30); l1->add(10); l1->add(60); l1->add(40); l1->add(45); l1->add(55);	
11->partition(45);	
<pre>cout &lt;&lt; 11-&gt;toString() &lt;&lt; "\n";</pre>	

Answer: (penalty regime: 0 %)

```
1 void LinkedList::partition(int k) {
        Node*head1=nullptr,*head2=nullptr,*head3=nullptr,*tail1,*tail2,*tail3,*temp;
 2
 3 🔻
        for(temp=head;temp!=nullptr;temp=temp->next){
 4 •
             if(temp->value<k){</pre>
 5
                 if(head1==nullptr){
 6
                     head1 = temp;
 7
                     tail1=head1;
                     //head=head1;
 8
 9
                 }
10
                 else{
11
                     tail1->next=temp;
12
                     tail1=tail1->next;
13
                     //temp=temp->next;
14
                 }
15
                 //temp=temp->next;
16
             if(temp->value==k){
17 •
18 •
                 if(head2==nullptr){
19
                     head2 = temp;
20
                     tail2=head2;
21 •
                     //if(head1){
22
                     //
                           head=head2;
                     //}
23
24
                 }
25 •
                 else{
26
                     tail2->next=temp;
27
                     tail2=tail2->next;
28
                     //temp=temp->next;
29
30
                 //temp=temp->next;
31
32 ▼
             if(temp->value>k){
33 •
                 if(head3==nullptr){
                     head3 = temp;
34
35
                     tail3=head3;
36
                 }
37
                 else{
38
                     tail3->next=temp;
39
                     tail3=tail3->next;
40
                     //temp=temp->next;
41
42
                 //temp=temp->next;
43
             }
44
45
        if(head1!=nullptr&&head2!=nullptr&&head3!=nullptr){
46
47
        head=head1;
48
        tail1->next=head2;
49
        tail2->next=head3;
50
        tail=tail3;
        tail->next=nullptr;
51
52
53
        if(head1!=nullptr&&head2!=nullptr&&head3==nullptr){
54
             head=head1;
             tail1->next=head2;
55
56
            tail=tail2;
57
            tail->next=nullptr;
58
        }
59
        if(head1!=nullptr&&head2==nullptr&&head3!=nullptr){
60
            head=head1;
```

```
tall->next=neaus;
рΤ
62
            tail=tail3;
63
            tail->next=nullptr;
64
65
        if(head1&&!head2&&!head3){
66 •
67
            head=head1;
68
            tail=tail1;
            tail->next=nullptr;
69
70
        if(head1==nullptr&&head2!=nullptr&&head3!=nullptr){
71 •
72
            head=head2;
73
            tail2->next=head3;
74
            tail=tail3;
            tail->next=nullptr;
75
76
77 🔻
        if(!head1&&head2&&!head3){
78
            head=head2;
79
            //tail2->next=head3;
80
            tail=tail2;
            tail->next=nullptr;
81
82
        if(!head1&&!head2&&head3){
83 🔻
84
            head=head3;
            tail=tail3;
85
86
            tail->next=nullptr;
87
        if(!head1&&!head2&&!head3){
88
89
            return ;
90
91
92
93
   }
```

	Test	Expected	Got	
~	LinkedList* l1 = new LinkedList(); l1->add(20); l1->add(30); l1->add(10); l1->add(60); l1->add(40); l1->add(45); l1->add(55); l1->partition(45); cout << l1->toString() << "\n";	[20,30,10,40,45,60,55]	[20,30,10,40,45,60,55]	~

## Passed all tests! 🗸

Chính xác

Chính xác

Điểm 1,00 của 1,00

Cho node root của một danh sách liên kết đơn, hiện thực hàm sau đây:

```
void reduceDuplicate(Node* root);
```

để giảm các phần tử trùng lặp liên tiếp trong danh sách. Nếu có các phần tử liên tiếp giống nhau, ta chỉ giữ lại 1 phần tử.

Ví dụ, ta có 1 danh sách 122234452, sau khi thực hiện hàm reduceDuplicate ta thu được danh sách 123452. (số 2 cuối cùng giữ nguyên do nó không liên tiếp với dãy 222 phía trước)

Lưu ý: Các bạn có thể include thêm thư viện nếu cần thiết

Cấu trúc của một node được cho bên dưới. Các ban chỉ cần viết nội dung hàm reduceDuplicate, các cấu trúc khác đã được import sẵn.

```
class Node
    int data;
    Node* next;
public:
    Node(): data(0), next(nullptr){}
    Node(int data, Node* next)
        this->data = data;
        this->next = next;
    }
    int getData()
    {
        return this->data;
    }
    void setData(int data)
    {
        this->data = data;
    }
    Node* getNext()
    {
        return this->next;
    }
    void setNext(Node* next)
    {
        this->next = next;
    }
};
```

Test	Result
Node* node1 = new Node(1, nullptr); Node* node2 = new Node(1, node1); Node* node3 = new Node(0, node2);	HEAD -> 0 -> 1 -> 1 -> NULL HEAD -> 0 -> 1 -> NULL
<pre>printList(node3);</pre>	
<pre>reduceDuplicate(node3);</pre>	
<pre>printList(node3);</pre>	

**Answer:** (penalty regime: 0, 0, 0, 100 %)

```
1 void reduceDuplicate(Node* root)
 2 ▼ {
 3
        if(root == NULL) return;
 4
        Node* str = root;
 5
        while(str->getNext() != NULL) {
                Node* check = str->getNext();
 6
 7 🔻
                if(str->getData() == check->getData()) {
 8
                    check = check->getNext();
 9
                    free(str->getNext());
10
                    str->setNext(check);
11
                } else str = str->getNext();
12
13
```

Test	Expected	Got	
	· -		

	Test	Expected	Got	
~	<pre>Node* node1 = new Node(1, nullptr); Node* node2 = new Node(1, node1); Node* node3 = new Node(0, node2); printList(node3); reduceDuplicate(node3); printList(node3);</pre>	HEAD -> 0 -> 1 -> 1 -> NULL HEAD -> 0 -> 1 -> NULL	HEAD -> 0 -> 1 -> 1 -> NULL HEAD -> 0 -> 1 -> NULL	~

Passed all tests! ✓



Điểm 1,00 của 1,00

# Class Train represents to a train, described as the following:

```
class Train {
  public:
     class TrainCar;
  private:
     TrainCar* head;
     TrainCar* tail;
     int size;
  public:
     class TrainCar {
        private:
          int remainingSpace;
          TrainCar* next:
          friend class Train;
        public:
          TrainCar() {this->next = NULL;}
          TrainCar(int remainingSpace, TrainCar* next = NULL) {
             this->remainingSpace = remainingSpace;
             this->next = next;
          }
     };
     Train() {
        this->head = new TrainCar(0);
       this->tail = this->head;
       this->size = 1;
     int allocate(int containerSize);
     int totalRemainingSpace();
};
```

### In this class:

- head is head of train (cannot contain container, index=0).
- tail is the last traincar of the train.
- size is the number of traincars the train has (include the head of train).

Each traincar (except head of train) can contains an amount of mass. Each traincar includes remainingSpace representing its current ability of containing and next presenting the next traincar (the head of train is the first traincar).

# Load the containers into the traincars of the train following these rules:

- Each container can be loaded into only one traincar.
- With a container with mass M, we must load it into the traincar having current ability of containing >= M and it is the smallest (if more than one traincar satisfying, choose the traincar with the smallest index). After that, we must update its current ability of containing.

## **Request:** Implement functions

int Train::allocate(int containerSize); int Train::totalRemainingSpace();

## where:

- Function allocate implements for loading the container with mass containerSize into the train. Return the result is the index of the traincar used for loading this container (if can) and return -1 (if cannot load).

- Function totalRemainingSpace implements for calculating the sum of the mass the train can contains. Return the result is the sum of the mass the train can contains currently.

# **Example:**

- N(M) represents that the traincar with index N can contain mass of M.
- Train

```
0(0)->1(200)->2(400)->3(300)->4(600)->5(500)->6(100)
```

- Implement allocate(390): the result is 2, update train:

```
0(0)->1(200)->2(10)->3(300)->4(600)->5(500)->6(100)
```

- Implement allocate(590): the result is 4, update train:

```
0(0)->1(200)->2(10)->3(300)->4(10)->5(500)->6(100)
```

- Implement totalRemainingSpace(): the result is 1120.
- Implement allocate(510): the result is -1.
- Implement allocate(10): the result is 2, update train:

```
0(0)->1(200)->2(0)->3(300)->4(10)->5(500)->6(100)
```

Note: In this exercise, libraries iostream and using namespace std; have been used. You can add other functions for your answer, but you are not allowed to add other libraries.

#### For example:

Test	Result
<pre>Train* t = new Train();</pre>	2
t->add(200); t->add(400); t->add(300); ; t->add(600); t->add(500);	4
t->add(100);	1120
<pre>cout &lt;&lt; t-&gt;allocate(390) &lt;&lt; "\n";</pre>	-1
<pre>cout &lt;&lt; t-&gt;allocate(590) &lt;&lt; "\n";</pre>	2
<pre>cout &lt;&lt; t-&gt;totalRemainingSpace() &lt;&lt; "\n";</pre>	<b>→</b>
<pre>cout &lt;&lt; t-&gt;allocate(510) &lt;&lt; "\n";</pre>	
<pre>cout &lt;&lt; t-&gt;allocate(10) &lt;&lt; "\n";</pre>	

Answer: (penalty regime: 0 %)

```
Reset answer
```

```
1 | int Train::allocate(int containerSize) {
        TrainCar * temp=head,*store_small=nullptr;
 3
        int i=0,smallest=INT32_MAX,pos_small;
 4
        while(temp!=nullptr){
 5 🔻
            if(containerSize<=temp->remainingSpace){
 6
                 //temp->remainingSpace-=containerSize;
 7
                 //cout<<smallest<<endl;</pre>
 8
                 if(smallest>temp->remainingSpace){
                     smallest=temp->remainingSpace;
 9
10
                     store_small=temp;
                     pos_small=i;
11
12
                 }
13
14
            temp=temp->next;
15
            i++;
16
17
        if(store_small){
            store_small->remainingSpace-=containerSize;
18
19
            return pos_small;
20
21
        return -1;
22
23
24
  int Train::totalRemainingSpace() {
25
        TrainCar * temp=head;
26
        int sum=0;
27 •
        while(temp!=nullptr){
```

```
temp=temp->next;

temp=temp->next;

return sum;

}

/
```

	Test	Expected	Got	
~	<pre>Train* t = new Train();</pre>	2	2	~
	t->add(200); t->add(400); t->add(300); ; t->add(600); t->add(500); t->add(100);	4	4	
	<pre>cout &lt;&lt; t-&gt;allocate(390) &lt;&lt; "\n";</pre>	1120	1120	
	<pre>cout &lt;&lt; t-&gt;allocate(590) &lt;&lt; "\n";</pre>	-1	-1	
	<pre>cout &lt;&lt; t-&gt;totalRemainingSpace() &lt;&lt; "\n";</pre>	2	2	
	<pre>cout &lt;&lt; t-&gt;allocate(510) &lt;&lt; "\n";</pre>			
	<pre>cout &lt;&lt; t-&gt;allocate(10) &lt;&lt; "\n";</pre>			

Passed all tests! ✓

Chính xác

Chính xác

Điểm 1,00 của 1,00

Implement methods **add**, **size** in template class **SLinkedList (which implements List ADT)** representing the singly linked list with type T with the initialized frame. The description of each method is given in the code.

```
template <class T>
class SLinkedList {
public:
    class Node; // Forward declaration
protected:
   Node* head;
   Node* tail;
   int count;
public:
    SLinkedList();
   ~SLinkedList();
   void
          add(T e);
   void add(int index, T e);
   int
public:
   class Node {
   private:
       T data;
       Node* next;
       friend class SLinkedList<T>;
   public:
       Node() {
            next = 0;
       Node(Node* next) {
            this->next = next;
       Node(T data, Node* next) {
            this->data = data;
            this->next = next;
    };
```

Test	Result
SLinkedList <int> list; int size = 10;</int>	[0,1,2,3,4,5,6,7,8,9]
<pre>for(int index = 0; index &lt; size; index++){     list.add(index); }</pre>	
<pre>cout &lt;&lt; list.toString();</pre>	
SLinkedList <int> list; int size = 10;</int>	[9,8,7,6,5,4,3,2,1,0]
<pre>for(int index = 0; index &lt; size; index++){     list.add(0, index); }</pre>	
<pre>cout &lt;&lt; list.toString();</pre>	

**Answer:** (penalty regime: 0, 0, 0, 5, 10, 15, ... %)

```
template <class T>
    void SLinkedList<T>::add(const T& e) {
         /* Insert an element into the end of the list. */
 4 •
        if (!count) {
 5
        head = tail = new Node(e);
 6 •
      } else {
 7
        tail->next = new Node(e);
        tail = tail->next;
 8
 9
10
      count++;
11
12
    template<class T>
    void SLinkedList<T>:::add(int index, const T& e) {
13
         /* Insert an element into the list at given index. */
14
        if(index == 0) {
15 •
16 •
             if(!count) {
17
                 head = tail = new Node(e);
18 •
                 Node* m = new Node(e, head);
19
20
                 head = m;
21
22
             count++;
23
            return;
24
25 •
        if(index == count) {
26
            tail->next = new Node(e);
            tail=tail->next;
27
28
             count++;
29
             return;
30
        }
        Node* str = head;
31
32 •
        for(int i=0;i<index - 1;i++) {</pre>
33
             str = str->next;
34
        Node* nn = str->next;
35
        Node* n = new Node(e, nn);
36
37
        str->next = n;
        while(tail->next) tail=tail->next;
38
39
        count++;
40
41
    template<class T>
42
43 v int SLinkedList<T>::size() {
44
        /* Return the length (size) of list */
45
        return count;
46
```

Test	Expected	Got		
------	----------	-----	--	--

	Test	Expected	Got	
~	<pre>SLinkedList<int> list; int size = 10;  for(int index = 0; index &lt; size; index++){     list.add(index); }</int></pre>	[0,1,2,3,4,5,6,7,8,9]	[0,1,2,3,4,5,6,7,8,9]	~
	<pre>cout &lt;&lt; list.toString();</pre>			

Passed all tests! 🗸



Chính xác

Điểm 1,00 của 1,00

Implement methods get, set, empty, indexOf, contains in template class SLinkedList (which implements List ADT) representing the singly linked list with type T with the initialized frame. The description of each method is given in the code.

```
template <class T>
class SLinkedList {
public:
   class Node; // Forward declaration
protected:
   Node* head;
   Node* tail;
   int count;
public:
   SLinkedList(): head(NULL), tail(NULL), count(0);
   ~SLinkedList() { };
   void
          add(T e);
   void
          add(int index, T e);
   int
           size();
   bool
          empty();
           get(int index);
   void
          set(int index, T e);
           indexOf(T item);
   int
   bool
          contains(T item);
public:
   class Node {
   private:
       T data;
       Node* next;
       friend class SLinkedList<T>;
   public:
       Node() {
           next = 0;
       Node(Node* next) {
           this->next = next;
       Node(T data, Node* next = NULL) {
           this->data = data;
           this->next = next;
        }
    };
};
```

Test Result
-------------

```
Result
Test
SLinkedList<int> list;
                                                     [8,15,2,4,7,10,40,6]
int values[] = {10, 15, 2, 6, 4, 7, 40,
                                               8};
int index[] = \{0, 0, 1, 3, 2, 3, 5,
int expvalues[]= {8, 15, 2, 4, 7, 10, 40, 6};
for (int idx = 0; idx < 8; idx++){
   list.add(index[idx], values[idx]);
assert( list.size() == 8 );
for (int idx = 0; idx < 8; idx++){
   assert( list.get(idx) == expvalues[idx] );
cout << list.toString();</pre>
SLinkedList<int> list;
                                                     []
assert( list.empty() == true );
cout << list.toString();</pre>
```

**Answer:** (penalty regime: 0, 0, 0, 5, 10, 15, ... %)

```
template<class T>
    T SLinkedList<T>::get(int index) {
        /* Give the data of the element at given index in the list. */
        if (index>=count||index<0) throw out_of_range("");</pre>
 4
        Node * temp = head;
 5
 6
        while (index>=1)
 7
        {
 8
            temp = temp->next;
 9
            index--;
10
11
        return temp->data;
12
13
    template <class T>
14
    void SLinkedList<T>::set(int index, const T& e) {
15
        /* Assign new value for element at given index in the list */
16
17
        if (index>=count||index<0) throw out_of_range("");</pre>
        Node * temp = head;
18
19
        while (index>=1)
20 •
        {
21
             temp = temp->next;
22
             index--;
23
        temp->data = e;
24
25
26
    template<class T>
27
28
    bool SLinkedList<T>::empty() {
29
        /* Check if the list is empty or not. */
        if (count>0) return 0;
30
31
        else return 1;
32
33
34
35
    template<class T>
36
   int SLinkedList<T>::indexOf(const T& item) {
        /* Return the first index wheter item appears in list, otherwise return -1 */
37
38
        Node * temp = head;
39
        int index = 0;
40
        while (temp!=nullptr)
41 •
42
             if (temp->data==item) return index;
```

```
בבסכן
44
            temp = temp->next;
            index++;
45
46
47
        }
48
        return -1;
49
50
51
    template<class T>
52 ▼
   bool SLinkedList<T>::contains(const T& item) {
        /* Check if item appears in the list */
53
        Node * temp = head;
54
        while (temp!=nullptr)
55
56 •
57
            if (temp->data==item) return 1;
58 🕶
            else{
            temp = temp->next;
59
60
61
        }
62
        return 0;
63
```

	Test	Expected	Got	
~	<pre>SLinkedList<int> list; int values[] = {10, 15, 2, 6, 4, 7, 40, 8}; int index[] = {0, 0, 1, 3, 2, 3, 5, 0}; int expvalues[] = {8, 15, 2, 4, 7, 10, 40, 6};  for (int idx = 0; idx &lt; 8; idx++){     list.add(index[idx], values[idx]); }  assert( list.size() == 8 );  for (int idx = 0; idx &lt; 8; idx++){     assert( list.get(idx) == expvalues[idx] ); }  cout &lt;&lt; list.toString();</int></pre>	[8,15,2,4,7,10,40,6]	[8,15,2,4,7,10,40,6]	~
~	<pre>SLinkedList<int> list; assert( list.empty() == true ); cout &lt;&lt; list.toString();</int></pre>	[]	[]	~

# Passed all tests! ✓

Chính xác

# Câu hỏi 9 Chính xác

Điểm 1.00 của 1.00

Implement methods **removeAt**, **removeItem**, **clear** in template class **SLinkedList** (**which implements List ADT**) representing the singly linked list with type T with the initialized frame. The description of each method is given in the code.

```
template <class T>
class SLinkedList {
public:
   class Node; // Forward declaration
protected:
   Node* head;
   Node* tail;
   int count;
public:
   SLinkedList();
   ~SLinkedList();
          add(T e);
   void
   void
           add(int index, T e);
   int
           size();
   bool
           empty();
   int
           size();
   void
          clear();
           get(int index);
   void
          set(int index, T e);
          indexOf(T item);
   int
   bool contains(T item);
   Τ
          removeAt(int index);
   bool
          removeItem(T item);
public:
   class Node {
   private:
       T data;
       Node* next;
       friend class SLinkedList<T>;
   public:
       Node() {
            next = 0;
       }
       Node(Node* next) {
           this->next = next;
       }
       Node(T data, Node* next = NULL) {
           this->data = data;
           this->next = next;
    };
};
```

Test	Result
SLinkedList <int> list;</int>	[1,2,3,4,5,6,7,8,9]
for (int i = 0; i < 10; ++i) { list.add(i);	
} assert(list.get(0) == list.removeAt(0));	
<pre>cout &lt;&lt; list.toString();</pre>	

Test	Result
SLinkedList <int> list;</int>	[0,1,2,3,4,5,6,7,8]
<pre>for (int i = 0; i &lt; 10; ++i) {     list.add(i); }</pre>	
<pre>assert(list.get(9) == list.removeAt(9));</pre>	
<pre>cout &lt;&lt; list.toString();</pre>	
SLinkedList <int> list;</int>	[0,1,2,3,4,5,6,7,8]
<pre>for (int i = 0; i &lt; 10; ++i) {     list.add(i); }</pre>	
<pre>assert(list.removeItem(9));</pre>	
<pre>cout &lt;&lt; list.toString();</pre>	

**Answer:** (penalty regime: 0, 0, 0, 5, 10, 15, ... %)

```
Reset answer
```

```
template <class T>
 2
   T SLinkedList<T>::removeAt(int index)
 3 ▼ {
 4
         /* Remove element at index and return removed value */
 5
 6
        T result;
 7
        Node *fhead = head;
 8
 9
        if (index == 0)
10 •
             result = head->data;
11
12
             Node *tmp = head->next;
13
             Node *k = head;
14
             head = tmp;
15
             delete k;
16
17
        else if ((index < count - 1) && (index > 0))
18
19
             for (int i = 1; i < index; i++)</pre>
                 fhead = fhead->next;
20
             result = fhead->next->data;
21
22
             Node *tmp = fhead->next;
23
             fhead->next = fhead->next->next;
24
25
             delete tmp;
26
27
        } else if (index == (count - 1))
28
29
             result = tail->data;
30
31
             for (int i = 1; i < count - 1; i++)</pre>
                 fhead = fhead->next;
32
33
34
             Node *tmp = tail;
35
             fhead->next = nullptr;
36
37
             delete tmp;
38
             tail = fhead;
39
        }
40
        count--;
41
        return result;
42
43
44
    template <class T>
    bool SLinkedList<T>::removeItem(const T& item)
45
46 ▼ {
         ^{\prime *} Remove the first annerance of item in list and return true. otherwise return false ^{*\prime}
47
```

```
48
         Node* fhead = head;
 49
         int index = 0;
         bool isFound = false;
 50
 51
 52
         while(fhead)
 53
 54
              if (fhead->data == item)
 55
              {
 56
                  isFound = true;
 57
                  break;
 58
 59
              index++;
 60
              fhead = fhead->next;
 61
 62
 63
         if (!isFound) return false;
 64
 65
         fhead = head;
 66
 67
         if (index == 0)
 68
              Node *tmp = head->next;
 69
 70
              Node *k = head;
              head = tmp;
 71
 72
              delete k;
 73
         else if ((index < count - 1) && (index > 0))
 74
 75
 76
              for (int i = 1; i < index; i++)</pre>
                  fhead = fhead->next;
 77
 78
              Node *tmp = fhead->next;
 79
 80
              fhead->next = fhead->next->next;
 81
 82
              delete tmp;
 83
         } else if (index == (count - 1))
 84
              for (int i = 1; i < count - 1; i++)
 85
 86
                  fhead = fhead->next;
 87
              Node *tmp = tail;
 88
 89
              fhead->next = nullptr;
 90
 91
              delete tmp;
 92
              tail = fhead;
 93
 94
 95
         count --;
 96
         return true;
 97
 98
 99
100
     template<class T>
101 void SLinkedList<T>::clear(){
102
         /* Remove all elements in list */
103
         Node* current = head;
104
105
106
         while (current != nullptr)
107
         {
108
              Node* next = current->next;
109
              delete current;
110
              current = next;
111
112
        head = nullptr;
113
        tail = nullptr;
         count = 0;
114
115
```

	Test	Expected	Got	
~	SLinkedList <int> list;</int>	[1,2,3,4,5,6,7,8,9]	[1,2,3,4,5,6,7,8,9]	~
	<pre>for (int i = 0; i &lt; 10; ++i) {     list.add(i); } assert(list.get(0) == list.removeAt(0)); cout &lt;&lt; list.toString();</pre>			
<b>~</b>	<pre>SLinkedList<int> list;  for (int i = 0; i &lt; 10; ++i) {     list.add(i); } assert(list.get(9) == list.removeAt(9));  cout &lt;&lt; list.toString();</int></pre>	[0,1,2,3,4,5,6,7,8]	[0,1,2,3,4,5,6,7,8]	*

Passed all tests! 🗸

Chính xác

Chính xác

Điểm 1,00 của 1,00

Class LLNode representing a node of singly linked lists is declared as below:

```
class LLNode {
public:
    int val;
    LLNode* next;
    LLNode(); // Constructor: val = 0, next = nullptr
    LLNode(int val, LLNode* next); // Constructor with customized data
```

Given a singly linked list head node.

Your task is to implement a function with following prototype:

```
LLNode* foldLinkedList(LLNode* head);
```

The function returns head node of the folded singly linked list.

#### More info:

A folded singly linked list is achieved by taking the first half of the linked list and folding over the second half and merging the intersecting nodes by taking their sum.

#### Note:

- The iostream library has been used and namespace std is being used. No other libraries are allowed.
- The constructors and methods of class LLNode have been defined fully so you do not need to redefine them.
- You can write helper functions.

#### For example:

Test	Result
<pre>int arr[] = {9, 5, 7, 5, 0}; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = foldLinkedList(head); LLNode::printList(newhead);</pre>	[9, 5, 7, 5, 0] [7, 10, 9]
<pre>int arr[] = {8, 4, 6, 8, 5, 3}; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = foldLinkedList(head); LLNode::printList(newhead);</pre>	[8, 4, 6, 8, 5, 3] [14, 9, 11]

Answer: (penalty regime: 0 %)

```
Reset answer
```

```
1 LLNode* foldLinkedList(LLNode* head) {
 2
        // STUDENT ANSWER
 3
        if(head==nullptr) return nullptr;
 4
        LLNode* temp=head;
 5
        int length=0;
        while(temp!=nullptr){
 6
 7
            length++;
 8
            temp=temp->next;
 9
10
        temp=head;
        int *arr=new int[length];
11
12 •
        for(int i=0;temp!=nullptr;i++){
13
            arr[i]=temp->val;
14
            temp=temp->next;
15
```

```
16
        int firsthalf,secondhalf;
17 •
        if(length%2==0){
            firsthalf=length/2-1;
18
            secondhalf=length/2;
19
20
21 🔻
        else{
22
            firsthalf=length/2-1;
23
            secondhalf=length/2+1;
24
        LLNode*ret_head=new LLNode();
25
        temp=ret_head;
26
27 🔻
        while(firsthalf>=0){
28
            temp->val=arr[firsthalf]+arr[secondhalf];
29 🔻
            if(firsthalf!=0){
                temp->next = new LLNode();
30
31
                temp=temp->next;
32
33
            firsthalf--;
34
            secondhalf++;
35
        if(length%2==0){
36 ▼
37
        }
38 •
        else{
39
            temp= new LLNode();
            temp->next=ret_head;
40
            temp->val=arr[length/2];
41
42
            ret_head=temp;
43
44
45
        return ret_head;
46 }
```

	Test	Expected	Got	
*	<pre>int arr[] = {9, 5, 7, 5, 0}; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = foldLinkedList(head); LLNode::printList(newhead);</pre>	[9, 5, 7, 5, 0] [7, 10, 9]	[9, 5, 7, 5, 0] [7, 10, 9]	*
*	<pre>int arr[] = {8, 4, 6, 8, 5, 3}; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = foldLinkedList(head); LLNode::printList(newhead);</pre>	[8, 4, 6, 8, 5, 3] [14, 9, 11]	[8, 4, 6, 8, 5, 3] [14, 9, 11]	*

Tes	t	Expected	Got	
LLNo size LLNo cout LLNo fold	<pre>arr[] = {}; ode* head = ode::createWithIterators(arr, arr + eof(arr) / sizeof(int)); ode::printList(head); t &lt;&lt; "\n"; ode* newhead = dLinkedList(head); ode::printList(newhead);</pre>	[]		•
5, 5 LLNG Size LLNG COUT LLNG	<pre>arr[] = {7, 3, 1, 9, 4, 6, 3, 8, 5}; ode* head = ode::createWithIterators(arr, arr + eof(arr) / sizeof(int)); ode::printList(head); t &lt;&lt; "\n"; ode* newhead = dLinkedList(head); ode::printList(newhead);</pre>	[7, 3, 1, 9, 4, 6, 3, 8, 5, 5] [10, 12, 9, 8, 12]	[7, 3, 1, 9, 4, 6, 3, 8, 5, 5] [10, 12, 9, 8, 12]	•
3, 2 9, 4 1, 4 5, 3 7, 5 7, 7 3, 3 LLNO SIZE LLNO COUT LLNO FOLO	4, 2, 0, 1, 5, 1, 2, 9, 5, 0, 5, 3, 1, 0, 6, 7, 3, 0, 9, 4, 0, 6, 0, 1, 2, 9, 6, 6, 4, 4, 1, 5, 9, 6, 1, 1, 9, 7, 7, 5, 1, 8, 4, 1, 4, 3, 0, 7, 7, 9, 2, 9, 4, 2, 1, 2, 5, 7, 6, 5, 1, 7, 2, 4, 3};  ode* head =	[8, 6, 9, 7, 3, 7, 6, 0, 3, 2, 2, 4, 6, 3, 6, 4, 2, 8, 3, 4, 2, 9, 4, 9, 5, 8, 5, 6, 9, 1, 5, 5, 9, 3, 1, 4, 2, 0, 1, 5, 1, 2, 9, 5, 0, 5, 3, 5, 1, 0, 6, 7, 3, 0, 9, 4, 0, 6, 0, 1, 3, 2, 9, 6, 6, 4, 4, 1, 5, 9, 6, 1, 1, 7, 9, 7, 7, 5, 1, 8, 4, 1, 4, 3, 0, 7, 7, 7, 9, 2, 9, 4, 2, 1, 2, 5, 7, 6, 5, 3, 1, 7, 2, 4, 3] [3, 7, 15, 4, 1, 11, 3, 6, 3, 7, 18, 8, 7, 9, 5, 1, 7, 13, 7, 4, 10, 12, 14, 8, 16, 11, 6, 16, 9, 10, 8, 12, 2, 11, 10, 15, 11, 6, 15, 7, 8, 5, 4, 7, 10, 6, 11, 10, 4, 14, 11, 10, 11]	[8, 6, 9, 7, 3, 7, 6, 0, 3, 2, 2, 4, 6, 3, 6, 4, 2, 8, 3, 4, 2, 9, 4, 9, 5, 8, 5, 6, 9, 1, 5, 5, 9, 3, 1, 4, 2, 0, 1, 5, 1, 2, 9, 5, 0, 5, 3, 5, 1, 0, 6, 7, 3, 0, 9, 4, 0, 6, 0, 1, 3, 2, 9, 6, 6, 4, 4, 1, 5, 9, 6, 1, 1, 7, 9, 7, 7, 5, 1, 8, 4, 1, 4, 3, 0, 7, 7, 7, 9, 2, 9, 4, 2, 1, 2, 5, 7, 6, 5, 3, 1, 7, 2, 4, 3] [3, 7, 15, 4, 1, 11, 3, 6, 3, 7, 18, 8, 7, 9, 5, 1, 7, 13, 7, 4, 10, 12, 14, 8, 16, 11, 6, 16, 9, 10, 8, 12, 2, 11, 10, 15, 11, 6, 15, 7, 8, 5, 4, 7, 10, 6, 11, 10, 4, 14, 11, 10, 11]	
3, 3, 4, 6, 8, 3, 7, 8, 8, 1, 9, 6, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	5, 1, 8, 0, 6, 8, 2, 2, 3, 4, 3, 0, 5, 1, 9, 8, 4, 9, 4, 9, 8, 9, 7, 6, 3, 8, 8, 6, 3, 0, 7, 3, 0, 9, 8, 1, 8, 4, 8, 1, 4, 2, 2, 3, 8, 7, 2, 8, 8, 8, 4, 2, 9, 5, 4, 2, 7, 6, 8, 4, 6, 5, 1, 0, 5, 6, 7, 3, 2, 7, 0, 8, 5, 0, 6, 3, 7, 5, 5, 9, 4, 5, 1, 4, 6, 3, 2, 5, 9, 7, 8, 5, 0, 9, 1, 8, 6, 1, 0, 5, 5, 7, 1, 8, 9, 8, 7, 7, 9, 5, 8, 9, 3, 8, 4, 4, 7, 1, 7, 2, 1, 6, 8, 8, 8, 8, 7, 0, 8, 0, 5, 6, 8, 8, 8, 4, 0, 6, 7, 5, 3, 6, 6, 2, 1, 1, 9, 3, 0, 5, 6, 9, 8, 6, 8, 2, 7, 3, 2, 6, 3, 0, 5, 9, 0, 9, 9, 7, 0, 8, 9, 8, 7, 8, 8, 8, 7, 8, 4, 0, 8, 0, 9, 9, 7, 0, 8, 9, 8, 7, 8, 8, 7, 8, 4, 0, 8, 0, 9, 9, 7, 0, 8, 9, 8, 7, 8, 8, 8, 7, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8,	[5, 8, 9, 4, 1, 3, 8, 2, 3, 3, 5, 5, 6, 8, 8, 7, 4, 8, 1, 5, 8, 5, 2, 5, 0, 9, 7, 0, 8, 1, 1, 3, 4, 8, 4, 0, 5, 1, 6, 6, 0, 2, 5, 2, 8, 2, 0, 8, 3, 0, 9, 4, 5, 2, 9, 3, 2, 2, 7, 0, 3, 7, 7, 2, 8, 0, 7, 4, 5, 9, 7, 2, 6, 3, 4, 3, 1, 2, 2, 6, 2, 7, 3, 1, 9, 7, 1, 9, 6, 2, 6, 8, 1, 1, 2, 9, 7, 6, 8, 6, 2, 9, 0, 8, 9, 0, 3, 0, 1, 6, 4, 3, 4, 5, 1, 8, 0, 6, 8, 2, 2, 3, 4, 3, 0, 5, 5, 1, 9, 8, 4, 9, 4, 9, 8, 9, 7, 6, 1, 3, 8, 8, 6, 3, 0, 7, 3, 0, 9, 8, 1, 7, 8, 4, 8, 1, 4, 2, 2, 3, 8, 7, 2, 8, 0, 8, 8, 4, 2, 9, 5, 4, 2, 7, 6, 8, 4, 9, 6, 5, 1, 0, 5, 6, 7, 3, 2, 7, 0, 8, 7, 5, 0, 6, 3, 7, 5, 5, 9, 4, 5, 1, 4, 3, 6, 3, 2, 5, 9, 7, 8, 5, 0, 9, 1, 8, 7, 6, 1, 0, 5, 5, 7, 1, 8, 9, 8, 7, 7, 2, 9, 5, 8, 9, 3, 8, 4, 4, 7, 1, 7, 2, 6, 1, 6, 8, 8, 8, 7, 0, 8, 0, 5, 6, 8, 6, 8, 8, 4, 0, 6, 7, 5, 3, 6, 6, 2, 1, 9, 1, 9, 3, 0, 5, 5, 2, 1, 2, 7, 4, 9, 6, 6, 5, 3, 5, 6, 9, 8, 6, 8, 2, 7, 3, 4, 2, 6, 3, 0, 5, 9, 0, 9, 9, 7, 0, 8, 6, 9, 8, 7, 8, 4, 0, 8, 0, 3, 0, 1, 8, 4, 5, 0, 2,	[5, 8, 9, 4, 1, 3, 8, 2, 3, 3, 5, 5, 6, 8, 8, 7, 4, 8, 1, 5, 8, 5, 2, 5, 0, 9, 7, 0, 8, 1, 1, 3, 4, 8, 4, 0, 5, 1, 6, 6, 0, 2, 5, 2, 8, 2, 0, 8, 3, 0, 9, 4, 5, 2, 9, 3, 2, 2, 7, 0, 3, 7, 7, 2, 8, 0, 7, 4, 5, 9, 7, 2, 6, 3, 4, 3, 1, 2, 2, 6, 2, 7, 3, 1, 9, 7, 1, 9, 6, 2, 6, 8, 1, 1, 2, 9, 7, 6, 8, 6, 2, 9, 0, 8, 9, 0, 3, 0, 1, 6, 4, 3, 4, 5, 1, 8, 0, 6, 8, 2, 2, 3, 4, 3, 0, 5, 5, 1, 9, 8, 4, 9, 4, 9, 8, 9, 7, 6, 1, 3, 8, 8, 6, 3, 0, 7, 3, 0, 9, 8, 1, 7, 8, 4, 8, 1, 4, 2, 2, 3, 8, 7, 2, 8, 0, 8, 8, 4, 2, 9, 5, 4, 2, 7, 6, 8, 4, 9, 6, 5, 1, 0, 5, 6, 7, 3, 2, 7, 0, 8, 7, 5, 0, 6, 3, 7, 5, 5, 9, 4, 5, 1, 4, 3, 6, 3, 2, 5, 9, 7, 8, 5, 0, 9, 1, 8, 7, 6, 1, 0, 5, 5, 7, 1, 8, 9, 8, 7, 7, 2, 9, 5, 8, 9, 3, 8, 4, 4, 7, 1, 7, 2, 6, 1, 6, 8, 8, 8, 7, 0, 8, 0, 5, 6, 8, 6, 8, 8, 4, 0, 6, 7, 5, 3, 6, 6, 2, 1, 9, 1, 9, 3, 0, 5, 5, 2, 1, 2, 7, 4, 9, 6, 6, 5, 3, 5, 6, 9, 8, 6, 8, 2, 7, 3, 4, 2, 6, 3, 0, 5, 9, 0, 9, 9, 7, 0, 8, 6, 9, 8, 7, 8, 4, 0, 8, 0, 3, 0, 1, 8, 4, 5, 0, 2,	

	Test	Expected	Got	
	Test  1, 6, 3, 0, 2, 4, 8, 5, 9, 0, 6, 0, 1, 7, 4, 1, 5, 6, 3, 9, 5, 2, 7, 0, 4, 4, 0, 8, 5, 4, 8, 5, 0, 8, 9, 7, 3, 6, 4, 4, 5, 0, 5, 0, 7, 9, 3, 4, 7, 2, 7, 9, 2, 1, 0, 9, 1, 3, 8, 5, 9, 4, 0, 5, 9, 9, 5, 1, 1, 0, 2, 9, 8, 8, 8, 8, 8, 2, 2, 5, 8, 3, 0, 5, 9, 5, 8, 7, 0, 6, 6, 2, 3, 5, 9, 0, 1, 9, 7, 1, 4, 5, 1, 5, 5, 3, 7, 2, 6, 4, 1, 3, 2, 4, 6, 5, 2, 4, 1, 1, 3, 5, 6, 2, 0, 0, 5, 4, 7, 8, 4, 3, 1, 7, 1, 9, 3, 8, 0, 7, 8, 0, 3, 6, 3, 8, 0, 3, 1, 7, 2, 1, 7, 9};  LLNode* head =  LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int));  LLNode::printList(head);  cout << "\n";  LLNode* newhead = foldLinkedList(head);  LLNode::printList(newhead);	7, 0, 7, 8, 4, 0, 3, 7, 5, 2, 5, 3, 9, 1, 2, 5, 1, 1, 2, 7, 4, 6, 1, 6, 3, 0, 2, 4, 8, 5, 9, 0, 6, 0, 1, 7, 4, 1, 5, 6, 3, 9, 5, 2, 7, 0, 4, 4, 0, 8, 5, 4, 8, 5, 0, 8, 9, 7, 3, 6, 4, 4, 5, 0, 5, 0, 7, 9, 3, 4, 7, 2, 7, 9, 2, 1, 0, 9, 1, 3, 8, 5, 9, 4, 0, 5, 9, 9, 5, 1, 1, 0, 2, 9, 8, 8, 8, 8, 8, 2, 2, 5, 8, 3, 0, 5, 9, 5, 8, 7, 0, 6, 6, 2, 3, 5, 9, 0, 1, 9, 7, 1, 4, 5, 1, 5, 5, 3, 7, 2, 6, 4, 1, 3, 2, 4, 6, 5, 2, 4, 1, 1, 3, 5, 6, 2, 0, 0, 5, 4, 7, 8, 4, 3, 1, 7,	7, 0, 7, 8, 4, 0, 3, 7, 5, 2, 5, 3, 9, 1, 2, 5, 1, 1, 2, 7, 4, 6, 1, 6, 3, 0, 2, 4, 8, 5, 9, 0, 6, 0, 1, 7, 4, 1, 5, 6, 3, 9, 5, 2, 7, 0, 4, 4, 0, 8, 5, 4, 8, 5, 0, 8, 9, 7, 3, 6, 4, 4, 5, 0, 5, 0, 7, 9, 3, 4, 7, 2, 7, 9, 2, 1, 0, 9, 1, 3, 8, 5, 9, 4, 0, 5, 9, 9, 5, 1, 1, 0, 2, 9, 8, 8, 8, 8, 2, 2, 5, 8, 3, 0, 5, 9, 5, 8, 7, 0, 6, 6, 2, 3, 5, 9, 0, 1, 9, 7, 1, 4, 5, 1, 5, 5, 3, 7, 2, 6, 4, 1, 3, 2, 4, 6, 5, 2, 4, 1, 1, 3, 5, 6, 2, 0, 0, 5, 4, 7, 8, 4, 3, 1, 7, 1, 9, 3, 8, 0, 7, 8, 0, 3, 6, 3, 8, 0, 3, 1, 7, 2, 1, 7, 9] [8, 7, 13, 14, 16, 12, 9, 14, 6, 7, 7, 14, 9, 7, 14, 9, 11, 9, 14, 10, 11, 10, 7, 13, 14, 10, 2, 9, 12, 9, 9, 7, 12, 12, 11, 6, 15, 9, 13, 14, 15, 11, 12, 5, 7, 8, 9, 7, 1, 10, 13, 9, 14, 14, 14, 3, 14, 6, 14, 15, 15, 8, 11, 2, 11, 7, 9, 5, 1, 9, 9, 11, 9, 6, 15, 6, 14, 10, 8, 5, 12, 9, 9, 10, 13, 3, 17, 3, 9, 13, 4, 3, 4, 11, 5, 14, 5, 14, 10, 1, 10, 13, 13, 10, 4, 11, 9, 3, 10, 11, 15, 9, 6, 12, 5, 10, 4, 8, 4, 13, 10, 3, 7, 7, 11, 15, 9, 11, 3, 6, 17, 7, 10, 17, 7, 10, 5, 8, 11, 11, 15, 14, 2, 8, 9, 3, 12, 15, 10, 14, 10, 10, 3, 5, 9, 11, 9, 2, 12, 18, 10, 12, 14, 0, 14, 8, 9, 10, 8, 9, 7, 3, 11, 10, 10, 6, 10, 5, 14, 5, 6, 15, 2, 8, 12, 3, 8, 4, 4, 12, 11, 3, 9, 1, 5, 11, 9, 9, 3, 1, 8, 5, 11, 16, 8, 9, 5, 6, 15, 6, 10,	
~	int arr[] = {0, 5, 7, 0, 9, 2, 8, 3, 2, 2, 9, 3, 7, 2, 8, 0, 1, 4, 7, 3, 4, 0, 4, 5, 2, 0, 3, 1, 5, 3, 0, 2, 8, 7, 7, 1, 5, 3, 7, 9, 6, 4, 9, 8, 5, 5, 4, 3, 6, 9, 8, 0, 4, 5, 9, 4, 1, 5, 4, 2, 6, 4, 2, 1, 3, 1, 4, 6, 9, 0, 9, 6, 9, 9, 2, 0, 8, 9, 4, 9, 7, 0, 0, 5, 1, 2, 5, 2, 7, 5, 3, 3, 9, 8, 6, 5, 7, 9, 7, 3, 3, 0, 5, 9, 1, 2, 0, 2, 8, 5, 6, 3, 2, 7, 8, 6, 1, 5, 7, 1, 4, 9, 3, 2, 6, 1, 7, 9, 9, 4, 0, 9, 9, 2, 1, 1, 4, 3, 8, 7, 0, 8, 5, 0, 2, 8, 9, 6, 6, 8, 0, 6, 4, 2, 5, 1, 7, 2, 1, 3, 1, 6, 9, 0, 3, 9, 6, 2, 8, 7, 8, 1, 8, 6, 8, 0, 5, 4, 8, 0, 0, 6, 7, 4, 3, 5, 6, 3, 2, 2, 8, 2, 6, 3, 7, 9, 7, 2, 0, 3, 7, 6, 7, 6, 3, 3, 0, 4, 3, 2, 4, 3, 1, 4, 1, 5, 0, 3, 7, 4, 4, 0, 3, 9, 0, 4, 1, 7, 6, 6, 3, 7, 0, 4, 3, 6, 9, 2, 6, 7, 8, 4, 7, 5, 8, 0, 3, 4, 0, 1, 9, 2, 9, 8, 8, 3, 9, 9, 6, 2, 0, 1, 4, 2, 1, 4, 9, 4, 3, 7, 9, 7, 0, 0, 2, 7, 7, 4, 5, 2, 9, 9, 2, 1, 5, 4, 0, 9, 1, 0, 9, 3, 9, 5, 2, 6, 8, 4, 0, 0, 1, 0, 0, 5, 9, 1, 2, 8, 4, 7, 2, 3, 2, 7, 5, 4, 8, 2, 0, 7, 8, 6, 0, 1, 5, 5, 1, 4, 2, 4, 1, 4, 1,	1, 0, 0, 5, 9, 1, 2, 8, 4, 7, 2, 3,	2, 11, 4, 8, 6, 10, 15, 14]  [0, 5, 7, 0, 9, 2, 8, 3, 2, 2, 9, 3, 7, 2, 8, 0, 1, 4, 7, 3, 4, 0, 4, 5, 2, 0, 3, 1, 5, 3, 0, 2, 8, 7, 7, 1, 5, 3, 7, 9, 6, 4, 9, 8, 5, 5, 4, 3, 6, 9, 8, 0, 4, 5, 9, 4, 1, 5, 4, 2, 6, 4, 2, 1, 3, 1, 4, 6, 9, 0, 9, 6, 9, 9, 2, 0, 8, 9, 4, 9, 7, 0, 0, 5, 1, 2, 5, 2, 7, 5, 3, 3, 9, 8, 6, 5, 7, 9, 7, 3, 3, 0, 5, 9, 1, 2, 0, 2, 8, 5, 6, 3, 2, 7, 8, 6, 1, 5, 7, 1, 4, 9, 3, 2, 6, 1, 7, 9, 9, 4, 0, 9, 9, 2, 1, 1, 4, 3, 8, 7, 0, 8, 5, 0, 2, 8, 7, 8, 1, 8, 6, 8, 0, 6, 4, 2, 5, 1, 7, 2, 1, 3, 1, 6, 9, 0, 3, 9, 6, 2, 8, 7, 8, 1, 8, 6, 8, 0, 5, 4, 8, 0, 0, 6, 7, 4, 3, 5, 6, 3, 2, 2, 8, 2, 6, 3, 7, 9, 7, 2, 0, 3, 7, 6, 7, 6, 3, 3, 0, 4, 3, 2, 4, 3, 1, 4, 1, 5, 0, 3, 7, 4, 4, 0, 3, 9, 0, 4, 1, 7, 6, 6, 3, 7, 0, 4, 3, 6, 9, 2, 6, 7, 8, 4, 7, 5, 8, 0, 3, 4, 0, 1, 9, 2, 9, 8, 8, 3, 9, 9, 6, 2, 0, 1, 4, 2, 1, 4, 9, 4, 3, 7, 9, 7, 0, 0, 2, 7, 7, 4, 5, 2, 9, 9, 2, 1, 5, 4, 0, 9, 1, 0, 9, 3, 9, 5, 2, 6, 8, 4, 0, 0, 1, 0, 0, 5, 9, 1, 2, 8, 4, 7, 2, 3,	*

	Expected	Got
, 5, 0, 7, 7, 6, 4, 7, 3, 9, 3, 9, 5		2, 7, 5, 4, 8, 2, 0, 7, 8, 6, 0, 1,
7, 2, 6, 2, 9, 7, 9, 0, 3, 1, 0, 2, 9		5, 5, 1, 4, 2, 4, 1, 4, 1, 4, 5, 0,
7, 5, 1, 3, 1, 5, 5, 9, 2, 3, 8, 5, 5		7, 7, 6, 4, 7, 3, 9, 3, 9, 5, 7, 2,
5, 0, 9, 1, 0, 0, 5, 2, 5, 6, 0, 7, 6		6, 2, 9, 7, 9, 0, 3, 1, 0, 2, 9, 7,
8, 4, 9, 4, 5, 9, 0, 3, 0, 2, 8, 7, 6, 8, 0, 9, 9, 6, 8, 1, 1, 3, 0, 7, 7, 4		5, 1, 3, 1, 5, 5, 9, 2, 3, 8, 5, 5, 6, 0, 9, 1, 0, 0, 5, 2, 5, 6, 0, 7,
3, 1, 6, 4, 2, 4, 6, 4, 7, 7, 2, 5, 8		6, 3, 4, 9, 4, 5, 9, 0, 3, 0, 2, 8,
5, 8, 5, 3, 6, 1, 8, 5, 2, 8, 6, 8, 6		7, 6, 4, 0, 9, 9, 6, 8, 1, 1, 3, 0,
0, 2, 5, 0, 4, 1, 8, 4, 2, 2, 3, 1, 0		7, 7, 4, 8, 1, 6, 4, 2, 4, 6, 4, 7,
, 8, 5, 3, 2, 7, 1, 7, 1, 8, 7, 8, 0	7, 2, 5, 8, 6, 8, 5, 3, 6, 1, 8, 5,	7, 2, 5, 8, 6, 8, 5, 3, 6, 1, 8, 5,
, 6, 1, 9, 1, 6, 7, 5, 3, 8, 3, 1, 9	2, 8, 6, 8, 6, 0, 2, 5, 0, 4, 1, 8,	2, 8, 6, 8, 6, 0, 2, 5, 0, 4, 1, 8,
8, 0, 4, 3, 4, 0, 5, 7, 3, 0, 8, 1, 0	4, 2, 2, 3, 1, 0, 4, 8, 5, 3, 2, 7,	4, 2, 2, 3, 1, 0, 4, 8, 5, 3, 2, 7,
7, 3, 4, 0, 8, 5, 0, 8, 7, 4, 7, 3, 5		1, 7, 1, 8, 7, 8, 0, 9, 6, 1, 9, 1,
5, 2, 5, 2, 5, 2, 0, 1, 9, 0, 1, 7, 6		6, 7, 5, 3, 8, 3, 1, 9, 8, 0, 4, 3,
2, 3, 1, 9, 5, 7, 2, 8, 2, 2, 9, 1, 1, 0, 1, 2, 2, 9, 2, 3, 0, 6, 8, 0, 3, 8		4, 0, 5, 7, 3, 0, 8, 1, 0, 7, 3, 4, 0, 8, 5, 0, 8, 7, 4, 7, 3, 5, 3, 2,
0, 4, 2, 5, 4, 7, 6, 8, 0, 2, 4, 9, 2		5, 2, 5, 2, 0, 1, 9, 0, 1, 7, 6, 2,
., 9, 3, 6, 0, 3, 1, 5, 6, 2, 5, 4, 3		3, 1, 9, 5, 7, 2, 8, 2, 2, 9, 1, 1,
8, 6, 9, 4, 1, 6, 8, 6, 0, 4, 3, 4, 4		0, 1, 2, 2, 9, 2, 3, 0, 6, 8, 0, 3,
7, 5, 8, 8, 4, 9, 9, 4, 3, 9, 9, 1, 1		8, 0, 4, 2, 5, 4, 7, 6, 8, 0, 2, 4,
, 9, 2, 3, 0, 8, 9, 1, 1, 8, 3, 0, 1	9, 2, 1, 9, 3, 6, 0, 3, 1, 5, 6, 2,	9, 2, 1, 9, 3, 6, 0, 3, 1, 5, 6, 2,
9, 9, 5, 0, 8, 0, 8, 8, 1, 2, 8, 5, 9	5, 4, 3, 8, 6, 9, 4, 1, 6, 8, 6, 0,	5, 4, 3, 8, 6, 9, 4, 1, 6, 8, 6, 0,
5, 4, 8, 0, 3, 9, 1, 4, 1, 5, 9, 5, 1		4, 3, 4, 4, 7, 5, 8, 8, 4, 9, 9, 4,
0, 1, 5, 3, 0, 0, 5, 6, 2, 9, 7, 7, 7		3, 9, 9, 1, 1, 5, 9, 2, 3, 0, 8, 9,
5, 5, 1, 7, 4, 6, 2, 4, 4, 4, 3, 3, 9 1, 7, 1, 2, 5, 2, 6, 6, 8, 8, 5, 2		1, 1, 8, 3, 0, 1, 2, 9, 5, 0, 8, 0,
0, 7, 1, 3, 5, 3, 6, 6, 0, 8, 8, 5, 2, ., 4, 1, 6, 4, 7, 9, 9, 1, 7, 8, 0, 8		8, 8, 1, 2, 8, 5, 9, 5, 4, 8, 0, 3, 9, 1, 4, 1, 5, 9, 5, 1, 9, 1, 5, 3,
i, 3, 1, 3, 6, 2, 4, 8, 0, 0, 5, 0, 6		0, 0, 5, 6, 2, 9, 7, 7, 7, 3, 5, 1,
5, 2, 5, 0, 4, 5, 0, 5, 3, 8, 1, 3, 1		7, 4, 6, 2, 4, 4, 4, 3, 3, 9, 0, 7,
7, 7, 9, 1, 6, 6, 8, 3, 5, 9, 4, 5, 9	1, 3, 5, 3, 6, 6, 0, 8, 8, 5, 2, 1,	1, 3, 5, 3, 6, 6, 0, 8, 8, 5, 2, 1,
0, 6, 0, 4, 0, 2, 9, 1, 6, 5, 8, 3, 5	4, 1, 6, 4, 7, 9, 9, 1, 7, 8, 0, 8,	4, 1, 6, 4, 7, 9, 9, 1, 7, 8, 0, 8,
0, 0, 6, 5, 5, 8, 6, 0, 2, 7, 5, 7, 9	5, 3, 1, 3, 6, 2, 4, 8, 0, 0, 5, 0,	5, 3, 1, 3, 6, 2, 4, 8, 0, 0, 5, 0,
0, 4, 3, 9, 4, 1, 2, 0, 2, 7, 0, 3, 7		6, 6, 2, 5, 0, 4, 5, 0, 5, 3, 8, 1,
0, 6, 5, 9, 4, 6, 0, 5, 5, 5, 0, 8, 3		3, 1, 7, 7, 9, 1, 6, 6, 8, 3, 5, 9,
s, 8, 0, 6, 7, 1, 5, 4, 7, 7, 5, 7, 6 s, 8, 4, 2, 7, 2, 5, 9, 0, 3, 1, 5, 6		4, 5, 9, 0, 6, 0, 4, 0, 2, 9, 1, 6, 5, 8, 3, 5, 0, 0, 6, 5, 5, 8, 6, 0,
i, 2, 7, 8, 1, 9, 0, 0, 3, 2, 2, 5, 3		2, 7, 5, 7, 9, 0, 4, 3, 9, 4, 1, 2,
4, 5, 0, 1, 0, 0, 5, 0, 2, 5, 1, 8, 9		0, 2, 7, 0, 3, 7, 9, 6, 5, 9, 4, 6,
0, 0, 8, 0, 6, 3, 7, 0, 7, 3, 2, 7, 7	0, 5, 5, 5, 0, 8, 3, 6, 8, 0, 6, 7,	0, 5, 5, 5, 0, 8, 3, 6, 8, 0, 6, 7,
, 9, 8, 8, 5, 6, 1, 7, 5, 2, 7, 9, 0	1, 5, 4, 7, 7, 5, 7, 6, 8, 8, 4, 2,	1, 5, 4, 7, 7, 5, 7, 6, 8, 8, 4, 2,
7, 2, 4, 5, 7, 8, 6, 5, 9, 5, 3, 9, 6		7, 2, 5, 9, 0, 3, 1, 5, 6, 5, 2, 7,
7, 6, 9, 3, 7, 9, 0, 8, 7, 3, 5, 2, 9		8, 1, 9, 0, 0, 3, 2, 2, 5, 3, 4, 5,
, 1, 8, 3, 6, 3, 5, 3, 9, 7, 3, 3, 7, , 1, 4, 2, 9, 7, 4, 3, 8, 2, 8, 8, 8		0, 1, 0, 0, 5, 0, 2, 5, 1, 8, 9, 0,
', 1, 4, 2, 9, 7, 4, 3, 8, 2, 0, 8, 8 !, 1, 3, 5, 9, 5, 5, 8, 2, 7, 3, 4, 9		0, 8, 0, 6, 3, 7, 0, 7, 3, 2, 7, 7, 4, 9, 8, 8, 5, 6, 1, 7, 5, 2, 7, 9,
3, 9, 7, 2, 5, 8, 4, 4, 6, 0, 7, 6, 4		0, 7, 2, 4, 5, 7, 8, 6, 5, 9, 5, 3,
7, 0, 8, 4, 1, 6, 6, 7, 8, 1, 6, 9, 5		9, 6, 7, 6, 9, 3, 7, 9, 0, 8, 7, 3,
, 6, 6, 8, 6, 6, 6, 5, 1, 0, 3, 3, 8	5, 2, 9, 3, 1, 8, 3, 6, 3, 5, 3, 9,	5, 2, 9, 3, 1, 8, 3, 6, 3, 5, 3, 9,
, 5, 8, 9, 5, 6, 5, 4, 0, 6, 7, 2, 6		7, 3, 3, 7, 7, 1, 4, 2, 9, 7, 4, 3,
., 6, 4, 6, 9, 6, 2, 0, 8, 2, 3, 7, 0		8, 2, 0, 8, 8, 2, 1, 3, 5, 9, 5, 5,
7, 4, 1, 0, 3, 7, 9, 5, 9, 1, 5, 5, 7		8, 2, 7, 3, 4, 9, 8, 9, 7, 2, 5, 8,
i, 2, 4, 6, 8, 0, 7, 9, 6}; .LNode* head =	4, 4, 6, 0, 7, 6, 4, 7, 0, 8, 4, 1,	4, 4, 6, 0, 7, 6, 4, 7, 0, 8, 4, 1,
.LNode::createWithIterators(arr, arr	6, 6, 7, 8, 1, 6, 9, 5, 1, 6, 6, 8, 6, 6, 6, 5, 1, 0, 3, 3, 8, 4, 5, 8,	6, 6, 7, 8, 1, 6, 9, 5, 1, 6, 6, 8, 6, 6, 6, 5, 1, 0, 3, 3, 8, 4, 5, 8,
<pre>izeof(arr) / sizeof(int));</pre>	9, 5, 6, 5, 4, 0, 6, 7, 2, 6, 1, 6,	9, 5, 6, 5, 4, 0, 6, 7, 2, 6, 1, 6,
LNode::printList(head);	4, 6, 9, 6, 2, 0, 8, 2, 3, 7, 0, 7,	4, 6, 9, 6, 2, 0, 8, 2, 3, 7, 0, 7,
out << "\n";	4, 1, 0, 3, 7, 9, 5, 9, 1, 5, 5, 7,	4, 1, 0, 3, 7, 9, 5, 9, 1, 5, 5, 7,
LNode* newhead =	6, 2, 4, 6, 8, 0, 7, 9, 6]	6, 2, 4, 6, 8, 0, 7, 9, 6]
oldLinkedList(head);	[3, 7, 8, 9, 9, 9, 8, 1, 14, 8, 1,	[3, 7, 8, 9, 9, 9, 8, 1, 14, 8, 1,
LNode::printList(newhead);	11, 9, 9, 3, 2, 17, 5, 10, 9, 13, 2,	11, 9, 9, 3, 2, 17, 5, 10, 9, 13, 2,
	6, 12, 5, 1, 8, 10, 3, 5, 17, 5, 8,	6, 12, 5, 1, 8, 10, 3, 5, 17, 5, 8,
	7, 12, 9, 9, 4, 14, 9, 4, 10, 12, 12,	7, 12, 9, 9, 4, 14, 9, 4, 10, 12, 12,
		Q 13 Q 7 A 7 1A 10 E 0 A
	8, 13, 9, 7, 4, 7, 14, 10, 5, 9, 4, 9, 2, 5, 5, 13, 7, 6, 5, 9, 5, 8, 12,	8, 13, 9, 7, 4, 7, 14, 10, 5, 9, 4, 9, 2, 5, 5, 13, 7, 6, 5, 9, 5, 8, 12,

	Test	Expected	Got	
	Test	Expected  12, 13, 13, 13, 10, 11, 16, 13, 10, 7, 11, 13, 7, 2, 13, 13, 9, 10, 0, 11, 10, 2, 9, 14, 12, 9, 1, 6, 15, 12, 8, 10, 0, 11, 8, 10, 7, 12, 14, 13, 8, 10, 15, 6, 10, 11, 3, 2, 14, 11, 7, 10, 10, 8, 12, 10, 14, 3, 7, 5, 9, 2, 13, 11, 13, 5, 9, 11, 7, 12, 10, 6, 14, 13, 10, 1, 5, 14, 6, 9, 15, 2, 3, 7, 7, 10, 14, 4, 6, 9, 9, 5, 0, 6, 3, 8, 5, 11, 7, 9, 12, 18, 4, 15, 6, 9, 12, 5, 13, 9, 6, 11, 9, 15, 2, 9, 4, 9, 16, 3, 6, 5, 15, 12, 12, 3, 4, 15, 9, 6, 10, 10, 12, 10, 14, 17, 7, 11, 14, 7, 7, 11, 1, 14, 7, 7, 11, 1, 14, 7, 7, 11, 1, 14, 7, 7, 11, 1, 14, 7, 7, 11, 1, 14, 7, 7, 11, 1, 14, 7, 7, 11, 9, 14, 9, 8, 13, 5, 6, 8, 5, 9, 11, 3, 7, 1, 8, 9, 11, 18, 17, 4, 5, 8, 8, 12, 11, 8, 8, 14, 11, 4, 13, 16, 7, 9, 17, 14, 6, 9, 2, 9, 12, 3, 12, 11, 14, 13, 2, 12, 11, 13, 17, 14, 7, 9, 10, 11, 9, 13, 15, 9, 13, 4, 8, 11, 9, 17, 7, 7, 14, 11, 16, 4, 7, 10, 6, 15, 7, 6, 10, 14, 8, 9, 11, 14, 9, 4, 10, 7, 17, 9, 4, 5, 9, 11, 5, 8, 11, 15, 16, 7, 9, 17, 7, 7, 14, 11, 16, 4, 7, 10, 6, 15, 7, 6, 10, 14, 8, 9, 11, 14, 9, 4, 10, 7, 17, 9, 4, 5, 9, 11, 5, 8, 11, 15, 16, 7, 9, 17, 7, 14, 11, 16, 4, 7, 10, 6, 15, 7, 6, 10, 14, 8, 9, 11, 14, 9, 4, 10, 7, 17, 9, 4, 5, 9, 11, 5, 8, 11, 13, 10, 9, 15, 6, 6, 16, 9, 14, 13, 1, 15, 12, 11, 9, 4, 7, 11, 9, 7, 8, 10, 13, 7, 10, 15, 10, 5, 0, 11, 12, 14, 7, 9, 13, 14, 13, 15, 9, 10, 9, 13, 10, 7, 7, 8, 13, 12, 8, 9, 9, 7, 1, 11, 2, 5, 12,	Got  12, 13, 13, 13, 10, 11, 16, 13, 10, 7, 11, 13, 7, 2, 13, 13, 9, 10, 0, 11, 10, 2, 9, 14, 12, 9, 1, 6, 15, 12, 8, 10, 0, 11, 8, 10, 7, 12, 14, 13, 8, 10, 15, 6, 10, 11, 3, 2, 14, 11, 7, 10, 10, 8, 12, 10, 14, 3, 7, 5, 9, 2, 13, 11, 13, 5, 9, 11, 7, 12, 10, 6, 14, 6, 13, 10, 6, 15, 15, 5, 7, 5, 5, 5, 7, 8, 9, 13, 10, 6, 12, 9, 0, 14, 13, 10, 1, 5, 14, 6, 9, 15, 2, 3, 7, 7, 10, 14, 4, 6, 9, 9, 5, 0, 6, 3, 8, 5, 11, 7, 9, 12, 18, 4, 15, 6, 9, 12, 5, 13, 9, 6, 11, 9, 15, 2, 9, 4, 9, 16, 3, 6, 5, 15, 12, 12, 3, 4, 15, 9, 6, 10, 10, 10, 1, 2, 9, 11, 16, 18, 3, 12, 11, 18, 6, 10, 3, 0, 6, 10, 0, 11, 12, 16, 10, 13, 16, 10, 8, 9, 11, 8, 9, 0, 15, 6, 12, 14, 7, 7, 11, 1, 14, 7, 7, 11, 9, 14, 9, 8, 13, 5, 6, 8, 5, 9, 11, 3, 7, 1, 8, 9, 11, 9, 13, 15, 4, 9, 2, 7, 12, 9, 5, 11, 5, 12, 7, 2, 4, 6, 5, 8, 4, 9, 11, 1, 8, 17, 4, 5, 8, 8, 12, 11, 8, 8, 14, 11, 4, 13, 16, 7, 9, 17, 14, 6, 9, 2, 9, 12, 3, 12, 11, 4, 13, 2, 12, 11, 13, 17, 14, 7, 9, 10, 11, 9, 13, 15, 9, 13, 4, 8, 11, 9, 17, 7, 7, 14, 11, 16, 4, 7, 10, 6, 15, 7, 6, 10, 14, 8, 9, 11, 14, 9, 4, 10, 7, 17, 9, 4, 5, 9, 11, 5, 8, 11, 5, 8, 12, 12, 14, 11, 13, 17, 5, 10, 8, 11, 11, 13, 11, 8, 7, 5, 8, 11, 13, 10, 9, 15, 6, 6, 16, 9, 14, 13, 1, 15, 12, 11, 9, 4, 7, 11, 9, 7, 8, 10, 13, 7, 10, 15, 10, 5, 0, 11, 12, 14, 7, 9, 13, 14, 13, 15, 9, 10, 9, 13, 10, 7, 7, 8, 13, 12, 8, 9, 9, 7, 1, 11, 2, 5, 12,	
~	int arr[] = {7, 0, 3, 1, 1, 2, 7, 0, 6, 5, 9, 8, 7, 4, 7, 6, 4, 1, 7, 5, 0, 8, 7, 9, 1, 5, 5, 1, 4, 6, 0, 9, 1, 9, 2, 0, 6, 9, 3, 7, 4, 4, 7, 4, 7, 0, 4, 5, 3, 5, 4, 9, 2, 4, 2, 0, 8, 2, 7, 5, 3, 5, 6, 6, 6, 2, 0, 1, 3, 8, 4, 9, 6, 1, 2, 3, 4, 6, 6, 4, 8, 2, 9, 7, 4, 1, 9, 7, 6, 2, 5, 8, 4, 2, 2, 7, 7, 0, 6, 4, 2, 4, 7, 0, 4, 3, 6, 3, 9, 7, 7, 7, 4, 9, 1, 1, 2, 6, 4, 2, 5, 4, 1, 0, 7, 5, 2, 0, 2, 9, 8, 2, 9, 4, 7, 0, 6, 5, 9, 6, 8, 1, 7, 4, 4, 8, 1, 9, 3, 3, 8, 1, 6, 6, 1, 1, 8, 7, 0, 1, 7, 1, 5, 5, 8, 5, 0, 3, 3, 2, 8, 8, 1, 9, 6, 5, 4, 5, 5, 6, 1, 0, 2, 0, 5, 5, 3, 3, 7, 6, 5, 3, 9, 3, 5, 4, 2, 0, 6, 4, 1, 5, 7, 5, 1, 4, 6, 0, 8, 5, 3, 0, 2, 8, 4, 6, 8, 2, 7, 2, 7, 9, 4, 8, 3, 0, 1, 0, 4, 2, 7, 9, 4, 1, 7, 4, 4, 0, 6, 6, 9, 8, 1, 3, 7, 2, 0, 5, 4, 8, 9, 1, 3, 2, 2, 0, 3, 9, 6, 7, 4, 7, 6, 7, 9, 7, 3, 0, 0, 8, 5, 3, 7, 5, 7, 7, 6, 3, 3, 6, 1, 0, 4, 7, 0, 1, 1, 6, 1, 9, 0, 9, 2, 2, 1, 7, 9, 7, 9, 9, 8, 4, 2, 1, 2, 9, 7, 2, 1, 4, 5, 1, 5, 7, 5, 2, 9, 2, 5, 0,	4, 8, 1, 9, 3, 3, 8, 1, 6, 6, 1, 1, 8, 7, 0, 1, 7, 1, 5, 5, 8, 5, 0, 3, 3, 2, 8, 8, 1, 9, 6, 5, 4, 5, 5, 6, 1, 0, 2, 0, 5, 5, 3, 3, 7, 6, 5, 3, 9, 3, 5, 4, 2, 0, 6, 4, 1, 5, 7, 5, 1, 4, 6, 0, 8, 5, 3, 0, 2, 8, 4, 6, 8, 2, 7, 2, 7, 9, 4, 8, 3, 0, 1, 0, 4, 2, 7, 9, 4, 1, 7, 4, 4, 0, 6, 6, 9, 8, 1, 3, 7, 2, 0, 5, 4, 8, 9, 1, 3, 2, 2, 0, 3, 9, 6, 7, 4, 7, 6, 7, 9, 7, 3, 0, 0, 8, 5, 3, 7, 5, 7, 7, 6, 3, 3, 6, 1, 0, 4, 7, 0, 1, 1, 6,	4, 7, 8, 4, 7, 7, 8, 9, 13, 11, 8, 8, 14, 9, 8, 5, 12, 8, 17, 0, 14, 14, 6]  [7, 0, 3, 1, 1, 2, 7, 0, 6, 5, 9, 8, 7, 4, 7, 6, 4, 1, 7, 5, 0, 8, 7, 9, 1, 5, 5, 1, 4, 6, 0, 9, 1, 9, 2, 0, 6, 9, 3, 7, 4, 4, 7, 4, 7, 0, 4, 5, 3, 5, 4, 9, 2, 4, 2, 0, 8, 2, 7, 5, 3, 5, 6, 6, 6, 2, 0, 1, 3, 8, 4, 9, 6, 1, 2, 3, 4, 6, 6, 4, 8, 2, 9, 7, 4, 1, 9, 7, 6, 2, 5, 8, 4, 2, 2, 7, 7, 0, 6, 4, 2, 4, 7, 0, 4, 3, 6, 3, 9, 7, 7, 7, 4, 9, 1, 1, 2, 6, 4, 2, 5, 4, 1, 0, 7, 5, 2, 0, 2, 9, 8, 2, 9, 4, 7, 0, 6, 5, 9, 6, 8, 1, 7, 4, 4, 8, 1, 9, 3, 3, 8, 1, 6, 6, 1, 1, 8, 7, 0, 1, 7, 1, 5, 5, 8, 5, 0, 3, 3, 2, 8, 8, 1, 9, 6, 5, 4, 5, 5, 6, 1, 0, 2, 0, 5, 5, 3, 3, 7, 6, 5, 3, 9, 3, 5, 4, 2, 0, 6, 4, 1, 5, 7, 5, 1, 4, 6, 0, 8, 5, 3, 0, 2, 8, 4, 6, 8, 2, 7, 2, 7, 9, 4, 1, 7, 4, 4, 0, 6, 6, 9, 8, 1, 3, 7, 2, 0, 5, 4, 8, 9, 1, 3, 2, 2, 0, 3, 9, 6, 7, 4, 7, 6, 7, 9, 7, 3, 0, 0, 8, 5, 3, 7, 5, 7, 7, 6, 3, 3, 6, 1, 0, 4, 7, 0, 1, 1, 6, 1, 9, 0, 9, 2, 2, 1, 7, 9, 7, 9, 9,	*

, 8, 0, 3, 7, 0, 2, 3, 4, 8, 4, 8, 8, , 5, 8, 6, 5, 9, 6, 9, 5, 6, 1, 9, 4, , 1, 9, 5, 2, 4, 5, 0, 5, 8, 3, 0, 6,	8, 4, 2, 1, 2, 9, 7, 2, 1, 4, 5, 1,	8, 4, 2, 1, 2, 9, 7, 2, 1, 4, 5, 1,
	F 7 F 2 O 2 F O 1 O O 2	
, 1, 9, 5, 2, 4, 5, 0, 5, 8, 3, 0, 6,	5, 7, 5, 2, 9, 2, 5, 0, 1, 8, 0, 3,	5, 7, 5, 2, 9, 2, 5, 0, 1, 8, 0, 3,
	7, 0, 2, 3, 4, 8, 4, 8, 8, 1, 5, 8,	7, 0, 2, 3, 4, 8, 4, 8, 8, 1, 5, 8,
, 6, 1, 9, 3, 5, 9, 0, 2, 2, 6, 3, 3,	6, 5, 9, 6, 9, 5, 6, 1, 9, 4, 1, 1,	6, 5, 9, 6, 9, 5, 6, 1, 9, 4, 1, 1,
, 2, 0, 0, 9, 8, 8, 2, 1, 7, 6, 8, 5,	9, 5, 2, 4, 5, 0, 5, 8, 3, 0, 6, 5,	9, 5, 2, 4, 5, 0, 5, 8, 3, 0, 6, 5,
, 1, 0, 0, 1, 4, 7, 3, 3, 9, 0, 9, 1,	6, 1, 9, 3, 5, 9, 0, 2, 2, 6, 3, 3,	6, 1, 9, 3, 5, 9, 0, 2, 2, 6, 3, 3,
, 5, 5, 7, 9, 2, 8, 7, 6, 2, 5, 4, 4,	3, 2, 0, 0, 9, 8, 8, 2, 1, 7, 6, 8,	3, 2, 0, 0, 9, 8, 8, 2, 1, 7, 6, 8,
, 2, 9, 5, 2, 3, 0, 9, 6, 9, 2, 6, 9,	5, 2, 1, 0, 0, 1, 4, 7, 3, 3, 9, 0,	5, 2, 1, 0, 0, 1, 4, 7, 3, 3, 9, 0,
, 9, 0, 3, 0, 6, 4, 9, 7, 5, 0, 1, 9,		9, 1, 0, 5, 5, 7, 9, 2, 8, 7, 6, 2,
, 4, 8, 4, 6, 0, 8, 5, 0, 6, 1, 5, 5,		5, 4, 4, 1, 2, 9, 5, 2, 3, 0, 9, 6,
, 2, 2, 0, 7, 4, 3, 6, 2, 0, 5, 7, 1,		9, 2, 6, 9, 3, 9, 0, 3, 0, 6, 4, 9,
, 0, 5, 1, 6, 1, 4, 7, 2, 0, 5, 1, 8,		7, 5, 0, 1, 9, 5, 4, 8, 4, 6, 0, 8,
, 2, 6, 0, 3, 2, 6, 0, 1, 9, 7, 3, 0,		5, 0, 6, 1, 5, 5, 9, 2, 2, 0, 7, 4,
, 8, 3, 2, 1, 9, 8, 6, 5, 1, 1, 9, 8,		3, 6, 2, 0, 5, 7, 1, 8, 0, 5, 1, 6,
, 5, 0, 6, 2, 1, 1, 2, 6, 5, 7, 2, 7,		1, 4, 7, 2, 0, 5, 1, 8, 2, 2, 6, 0,
, 7, 6, 7, 8, 2, 6, 3, 1, 4, 2, 2, 0,		3, 2, 6, 0, 1, 9, 7, 3, 0, 1, 8, 3,
, 4, 8, 8, 2, 5, 2, 8, 8, 8, 3, 0, 5,		2, 1, 9, 8, 6, 5, 1, 1, 9, 8, 0, 5,
, 6, 3, 6, 4, 0, 8, 7, 4, 4, 0, 5, 6,		0, 6, 2, 1, 1, 2, 6, 5, 7, 2, 7, 8,
, 0, 1, 1, 0, 6, 0, 8, 8, 9, 5, 6, 5,		7, 6, 7, 8, 2, 6, 3, 1, 4, 2, 2, 0,
, 0, 0, 6, 4, 8, 2, 9, 8, 1, 2, 4, 8,	0, 4, 8, 8, 2, 5, 2, 8, 8, 8, 3, 0,	0, 4, 8, 8, 2, 5, 2, 8, 8, 8, 3, 0,
, 6, 2, 3, 3, 7, 7, 0, 7, 0, 6, 2, 8,	5, 9, 6, 3, 6, 4, 0, 8, 7, 4, 4, 0,	5, 9, 6, 3, 6, 4, 0, 8, 7, 4, 4, 0,
, 0, 2, 0, 3, 3, 3, 1, 3, 9, 1, 8, 6,		5, 6, 6, 0, 1, 1, 0, 6, 0, 8, 8, 9,
, 6, 6, 9, 7, 8, 1, 5, 8, 3, 7, 0, 0,		5, 6, 5, 7, 0, 0, 6, 4, 8, 2, 9, 8,
, 1, 1, 4, 8, 9, 9, 1, 5, 1, 9, 2, 5,		1, 2, 4, 8, 1, 6, 2, 3, 3, 7, 7, 0,
, 6, 2, 6, 0, 5, 1, 1, 9, 9, 2, 0, 5,	7, 0, 6, 2, 8, 9, 0, 2, 0, 3, 3, 3,	7, 0, 6, 2, 8, 9, 0, 2, 0, 3, 3, 3,
, 9, 6, 2, 7, 5, 6, 1, 3, 2, 8, 2, 2,	1, 3, 9, 1, 8, 6, 3, 6, 6, 9, 7, 8,	1, 3, 9, 1, 8, 6, 3, 6, 6, 9, 7, 8,
, 1, 2, 6, 4, 8, 1, 6, 3, 4, 6, 4, 8,	1, 5, 8, 3, 7, 0, 0, 1, 1, 1, 4, 8,	1, 5, 8, 3, 7, 0, 0, 1, 1, 1, 4, 8,
, 3, 5, 0, 1, 5, 0, 7, 2, 7, 1, 4, 0,	9, 9, 1, 5, 1, 9, 2, 5, 1, 6, 2, 6,	9, 9, 1, 5, 1, 9, 2, 5, 1, 6, 2, 6,
, 5, 2, 6, 1, 3, 3, 6, 6, 1, 1, 5, 5,	0, 5, 1, 1, 9, 9, 2, 0, 5, 4, 9, 6,	0, 5, 1, 1, 9, 9, 2, 0, 5, 4, 9, 6,
, 2, 6, 0, 9, 0, 8, 4, 5, 6, 9, 4, 4,	2, 7, 5, 6, 1, 3, 2, 8, 2, 2, 4, 1,	2, 7, 5, 6, 1, 3, 2, 8, 2, 2, 4, 1,
, 9, 9, 9, 7, 8, 9, 3, 5, 2, 0, 9, 8,	2, 6, 4, 8, 1, 6, 3, 4, 6, 4, 8, 1,	2, 6, 4, 8, 1, 6, 3, 4, 6, 4, 8, 1,
, 0, 5, 6, 2, 3, 8, 7, 5, 3, 9, 8, 3,	3, 5, 0, 1, 5, 0, 7, 2, 7, 1, 4, 0,	3, 5, 0, 1, 5, 0, 7, 2, 7, 1, 4, 0,
, 4, 2, 0, 7, 5, 2, 0, 9, 3, 5, 5, 2,	5, 5, 2, 6, 1, 3, 3, 6, 6, 1, 1, 5,	5, 5, 2, 6, 1, 3, 3, 6, 6, 1, 1, 5,
, 3, 1, 4, 7, 1, 7, 7, 7, 2, 8, 0, 9,	5, 7, 2, 6, 0, 9, 0, 8, 4, 5, 6, 9,	5, 7, 2, 6, 0, 9, 0, 8, 4, 5, 6, 9,
, 7, 2, 6, 0, 0, 2, 7, 2, 4, 0, 1, 6,	4, 4, 7, 9, 9, 9, 7, 8, 9, 3, 5, 2,	4, 4, 7, 9, 9, 9, 7, 8, 9, 3, 5, 2,
, 0, 2, 9, 3, 5, 2, 6, 5, 1, 1, 0, 0,	0, 9, 8, 1, 0, 5, 6, 2, 3, 8, 7, 5,	0, 9, 8, 1, 0, 5, 6, 2, 3, 8, 7, 5,
, 2, 8, 9, 8, 8, 9, 1, 7, 3, 1, 4, 6,	3, 9, 8, 3, 8, 4, 2, 0, 7, 5, 2, 0,	3, 9, 8, 3, 8, 4, 2, 0, 7, 5, 2, 0,
, 8, 7, 9, 7, 0, 7, 7, 8, 4, 9, 4, 1,	9, 3, 5, 5, 2, 7, 3, 1, 4, 7, 1, 7,	9, 3, 5, 5, 2, 7, 3, 1, 4, 7, 1, 7,
, 2, 1, 0, 7, 0, 2, 7, 6, 7, 9, 4, 2,	7, 7, 2, 8, 0, 9, 4, 7, 2, 6, 0, 0,	7, 7, 2, 8, 0, 9, 4, 7, 2, 6, 0, 0,
, 4, 9, 0, 8, 8, 4, 6, 5, 9, 0, 0, 5,	2, 7, 2, 4, 0, 1, 6, 7, 0, 2, 9, 3,	2, 7, 2, 4, 0, 1, 6, 7, 0, 2, 9, 3,
, 0, 0, 1, 1, 4, 0, 0, 8, 7, 8, 8, 2,	5, 2, 6, 5, 1, 1, 0, 0, 2, 2, 8, 9,	5, 2, 6, 5, 1, 1, 0, 0, 2, 2, 8, 9,
, 7, 6, 8, 2, 5, 3, 9, 2, 5, 2, 5, 9,	8, 8, 9, 1, 7, 3, 1, 4, 6, 6, 8, 7,	8, 8, 9, 1, 7, 3, 1, 4, 6, 6, 8, 7,
, 6, 4, 3, 3, 9, 6, 8, 8, 5, 3, 8, 3,	9, 7, 0, 7, 7, 8, 4, 9, 4, 1, 6, 2,	9, 7, 0, 7, 7, 8, 4, 9, 4, 1, 6, 2,
, 9, 5, 7, 9, 7, 8, 5, 8, 9, 2, 3, 5,	1, 0, 7, 0, 2, 7, 6, 7, 9, 4, 2, 3,	1, 0, 7, 0, 2, 7, 6, 7, 9, 4, 2, 3,
, 9, 5, 4, 9, 8, 7, 1, 2, 1, 2, 9, 0,	4, 9, 0, 8, 8, 4, 6, 5, 9, 0, 0, 5,	4, 9, 0, 8, 8, 4, 6, 5, 9, 0, 0, 5,
, 2, 9, 4, 8, 7, 7, 1, 5, 8, 3, 4, 1,	7, 0, 0, 1, 1, 4, 0, 0, 8, 7, 8, 8,	7, 0, 0, 1, 1, 4, 0, 0, 8, 7, 8, 8,
, 7, 6, 1, 7, 9, 0, 6, 1, 8, 7, 7, 6,	2, 7, 7, 6, 8, 2, 5, 3, 9, 2, 5, 2,	2, 7, 7, 6, 8, 2, 5, 3, 9, 2, 5, 2,
, 0, 9, 9, 4, 8, 0, 1, 1, 2, 5, 5, 4,		5, 9, 0, 6, 4, 3, 3, 9, 6, 8, 8, 5,
, 3, 0, 1, 1, 9, 8, 1, 2, 1, 3, 3, 6,		3, 8, 3, 9, 9, 5, 7, 9, 7, 8, 5, 8,
, 9, 6, 9, 5, 8, 6, 4, 6, 1, 9, 4, 6,		9, 2, 3, 5, 7, 9, 5, 4, 9, 8, 7, 1,
, 7, 8, 2, 2, 4, 4, 6, 2, 1, 4, 5, 4,		2, 1, 2, 9, 0, 9, 2, 9, 4, 8, 7, 7,
, 5, 9, 7, 3, 0, 3, 6, 5, 5, 9, 7, 3,		1, 5, 8, 3, 4, 1, 9, 7, 6, 1, 7, 9,
, 4, 6, 8, 8, 4, 7, 7, 2, 5, 8, 3, 1,		0, 6, 1, 8, 7, 7, 6, 0, 0, 9, 9, 4,
, 7, 9, 8, 8, 6, 0, 6, 1, 9, 3, 0, 8,		8, 0, 1, 1, 2, 5, 5, 4, 0, 3, 0, 1,
, 9, 6, 8, 0, 6, 9, 2, 1, 6, 7, 8, 3,		1, 9, 8, 1, 2, 1, 3, 3, 6, 4, 9, 6,
, 6, 4, 6, 0, 6, 8, 3, 5, 5, 7, 8, 8,		9, 5, 8, 6, 4, 6, 1, 9, 4, 6, 0, 7,
, 4, 4, 0, 9, 4, 0, 0, 2, 3, 9, 5, 4,		8, 2, 2, 4, 4, 6, 2, 1, 4, 5, 4, 0,
, 5, 9, 1, 7, 8, 0, 3, 6, 4, 1, 2, 4,	5, 9, 7, 3, 0, 3, 6, 5, 5, 9, 7, 3,	5, 9, 7, 3, 0, 3, 6, 5, 5, 9, 7, 3,
, 7, 1, 1, 7, 2, 6, 3, 4, 6, 7, 2, 7, 3 6 2 9 7 0 0 9 3 7 5 8		2, 4, 6, 8, 8, 4, 7, 7, 2, 5, 8, 3,
, 3, 6, 2, 9, 7, 0, 0, 9, 3, 7, 5, 8, 9 9 0 4 7 1 1 3 0 4 0 4		1, 4, 7, 9, 8, 8, 6, 0, 6, 1, 9, 3,
, 9, 9, 0, 4, 7, 1, 1, 3, 0, 4, 0, 4,		0, 8, 3, 9, 6, 8, 0, 6, 9, 2, 1, 6,
, 5, 2, 0, 3, 1, 5, 2, 4, 3, 4, 6, 4,		7, 8, 3, 6, 6, 4, 6, 0, 6, 8, 3, 5,
, 2, 9, 7, 7, 5, 0, 8, 4, 3, 3, 0, 1,		5, 7, 8, 8, 7, 4, 4, 0, 9, 4, 0, 0,
, 1, 9, 7, 6, 7, 4, 8, 7, 3, 8, 3, 3,	2, 3, 9, 5, 4, 3, 5, 9, 1, 7, 8, 0,	2, 3, 9, 5, 4, 3, 5, 9, 1, 7, 8, 0,

Test	Expected	Got
8, 7, 4, 4, 8, 3, 6, 2, 4, 3, 0, 1, 3,	6, 3, 4, 6, 7, 2, 7, 4, 3, 6, 2, 9,	6, 3, 4, 6, 7, 2, 7, 4, 3, 6, 2, 9,
8, 9, 8, 6, 8, 4, 8, 8, 6, 6, 2, 1, 7,	7, 0, 0, 9, 3, 7, 5, 8, 2, 9, 9, 0,	7, 0, 0, 9, 3, 7, 5, 8, 2, 9, 9, 0,
7, 4, 4, 9, 8, 9, 4, 9, 5, 4, 4, 7, 8, 8, 0, 1, 9, 1, 8, 1, 4, 0, 5, 3, 4, 7,	4, 7, 1, 1, 3, 0, 4, 0, 4, 2, 5, 2, 0, 3, 1, 5, 2, 4, 3, 4, 6, 4, 5, 2,	4, 7, 1, 1, 3, 0, 4, 0, 4, 2, 5, 2,         0, 3, 1, 5, 2, 4, 3, 4, 6, 4, 5, 2,
5, 4, 4, 8, 6, 5, 7, 4, 9, 3, 3, 0, 7,	9, 7, 7, 5, 0, 8, 4, 3, 3, 0, 1, 7,	9, 7, 7, 5, 0, 8, 4, 3, 3, 0, 1, 7,
1, 6, 4, 8, 7, 6, 7, 1, 1, 4, 8, 1, 4,	1, 9, 7, 6, 7, 4, 8, 7, 3, 8, 3, 3,	1, 9, 7, 6, 7, 4, 8, 7, 3, 8, 3, 3,
1, 9, 4, 8, 1, 2, 7, 8, 1, 6, 6, 7, 9,		8, 5, 3, 5, 7, 8, 7, 4, 1, 1, 6, 9,
5, 8, 6, 5, 8, 8, 3, 4, 1, 1, 9, 1, 0, 1, 4, 9, 8, 1, 5, 1, 3, 8, 5, 2, 4, 3,	2, 8, 7, 4, 4, 8, 3, 6, 2, 4, 3, 0, 1, 3, 8, 9, 8, 6, 8, 4, 8, 8, 6, 6,	2, 8, 7, 4, 4, 8, 3, 6, 2, 4, 3, 0, 1, 3, 8, 9, 8, 6, 8, 4, 8, 8, 6, 6,
5, 9, 6, 3, 4, 3, 2, 2, 3, 0, 8, 2, 3,	2, 1, 7, 7, 4, 4, 9, 8, 9, 4, 9, 5,	2, 1, 7, 7, 4, 4, 9, 8, 9, 4, 9, 5,
9, 3, 3, 1, 1, 5, 0, 8, 7, 9, 7, 5, 6,		4, 4, 7, 8, 8, 0, 1, 9, 1, 8, 1, 4,
9, 2, 3, 1, 8, 0, 9, 6, 0, 2, 5, 6, 1,	0, 5, 3, 4, 7, 5, 4, 4, 8, 6, 5, 7,	0, 5, 3, 4, 7, 5, 4, 4, 8, 6, 5, 7,
3, 7, 3, 4, 7, 2,snip 5, 9, 4, 1, 8, 8, 9, 1, 6, 8, 1, 6, 9, 1, 7, 7,	4, 9, 3, 3, 0, 7, 1, 6, 4, 8, 7, 6, 7, 1, 1, 4, 8, 1, 4, 1, 9, 4, 8, 1,	4, 9, 3, 3, 0, 7, 1, 6, 4, 8, 7, 6,       7, 1, 1, 4, 8, 1, 4, 1, 9, 4, 8, 1,
5, 0, 0, 3, 2, 8, 2, 6, 1, 8, 4, 9, 0,	2, 7, 8, 1, 6, 6, 7, 9, 5, 8, 6, 5,	2, 7, 8, 1, 6, 6, 7, 9, 5, 8, 6, 5,
9, 1, 1, 3, 4, 9, 5, 6, 0, 3, 6, 0, 4,	8, 8, 3, 4, 1, 1, 9, 1, 0, 1, 4, 9,	8, 8, 3, 4, 1, 1, 9, 1, 0, 1, 4, 9,
3, 8, 6, 6, 0, 5, 6, 6, 7, 6, 7, 8, 3,	8, 1, 5, 1, 3, 8, 5, 2, 4, 3, 5, 9,	8, 1, 5, 1, 3, 8, 5, 2, 4, 3, 5, 9,
3, 8, 8, 1, 6, 9, 7, 0, 8, 6, 8, 2, 8, 2, 8, 3, 8, 2, 2, 5, 0, 6, 2, 3, 8, 5,	6, 3, 4, 3, 2, 2, 3, 0, 8, 2, 3, 9, 3, 3, 1, 1, 5, 0, 8, 7, 9, 7, 5, 6,	6, 3, 4, 3, 2, 2, 3, 0, 8, 2, 3, 9, 3, 3, 1, 1, 5, 0, 8, 7, 9, 7, 5, 6,
9, 2, 0, 5, 1, 4, 5, 7, 4, 1, 9, 4, 5,	9, 2, 3, 1, 8, 0, 9, 6, 0, 2, 5, 6,	9, 2, 3, 1, 8, 0, 9, 6, 0, 2, 5, 6,
8, 6, 0, 4, 9, 8, 5, 3, 7, 2, 9, 4, 5,	1, 3, 7, 3, 4, 7, 2, 3, 0, 0, 5,	1, 3, 7, 3, 4, 7, 2, 3, 0, 0, 5,
5, 7, 6, 7, 2, 6, 1, 8, 4, 9, 6, 5, 9,	snip, 6, 6, 11, 13, 15, 9, 11,	snip, 6, 6, 11, 13, 15, 9, 11,
5, 1, 6, 9, 7, 1, 6, 3, 9, 3, 3, 4, 1, 4, 0, 5, 2, 0, 8, 4, 4, 1, 6, 9, 3, 5,	4, 13, 12, 12, 9, 13, 12, 12, 9, 10, 16, 13, 8, 15, 4, 16, 4, 3, 7, 4, 8,	4, 13, 12, 12, 9, 13, 12, 12, 9, 10, 16, 13, 8, 15, 4, 16, 4, 3, 7, 4, 8,
6, 6, 7, 7, 4, 7, 0, 5, 8, 6, 6, 8, 7,	8, 5, 7, 7, 15, 13, 6, 6, 10, 15, 7,	8, 5, 7, 7, 15, 13, 6, 6, 10, 15, 7,
7, 1, 0, 8, 8, 2, 6, 1, 3, 1, 0, 5, 7,	8, 10, 8, 12, 8, 7, 7, 2, 10, 10, 10,	8, 10, 8, 12, 8, 7, 7, 2, 10, 10, 10,
8, 9, 3, 7, 3, 0, 0, 0, 3, 5, 0, 8, 0,	6, 12, 7, 10, 2, 1, 15, 12, 2, 15,	6, 12, 7, 10, 2, 1, 15, 12, 2, 15,
9, 2, 2, 7, 3, 3, 9, 1, 8, 0, 1, 3, 8, 2, 1, 1, 0, 2, 8, 7, 8, 7, 6, 4, 7, 1,	10, 5, 9, 5, 12, 10, 17, 9, 3, 14, 12, 2, 6, 3, 7, 12, 2, 15, 6, 13, 5,	10, 5, 9, 5, 12, 10, 17, 9, 3, 14, 12, 2, 6, 3, 7, 12, 2, 15, 6, 13, 5,
4, 6, 0, 4, 0, 9, 8, 5, 5, 4, 7, 3, 6,	8, 9, 10, 4, 10, 8, 14, 4, 3, 4, 12,	8, 9, 10, 4, 10, 8, 14, 4, 3, 4, 12,
2, 7, 9, 5, 6, 7, 0, 5, 8, 3, 6, 3, 9,	8, 4, 1, 8, 9, 9, 16, 13, 10, 10, 9,	8, 4, 1, 8, 9, 9, 16, 13, 10, 10, 9,
5, 0, 5, 0, 3, 8, 8, 0, 2, 7, 6, 3, 1, 9, 7, 6, 5, 4, 8, 3, 4, 6, 0, 5, 4, 2,	16, 4, 6, 6, 0, 8, 9, 9, 12, 9, 12, 12, 15, 10, 11, 7, 10, 17, 11, 6, 13,	16, 4, 6, 6, 0, 8, 9, 9, 12, 9, 12, 12, 12, 15, 10, 11, 7, 10, 17, 11, 6, 13,
5, 8, 0, 4, 2, 8, 6, 5, 2, 6, 9, 5, 4,	4, 11, 14, 6, 14, 10, 15, 6, 2, 14,	4, 11, 14, 6, 14, 10, 15, 6, 2, 14,
2, 4, 1, 1, 6, 3, 3, 0, 0, 7, 2, 4, 2,	6, 3, 16, 14, 9, 5, 15, 6, 6, 10, 10,	6, 3, 16, 14, 9, 5, 15, 6, 6, 10, 10,
4, 9, 7, 7, 7, 1, 9, 4, 3, 6, 7, 5, 8,	13, 6, 11, 12, 16, 12, 11, 10, 1, 8,	13, 6, 11, 12, 16, 12, 11, 10, 1, 8,
7, 2, 2, 8, 1, 4, 0, 3, 2, 3, 6, 3, 0, 0, 1, 4, 9, 2, 3, 0, 3, 8, 6, 3, 5, 8,	12, 7, 7, 15, 7, 8, 10, 16, 12, 9, 4, 9, 16, 14, 9, 7, 10, 4, 1, 9, 10, 12,	12, 7, 7, 15, 7, 8, 10, 16, 12, 9, 4, 9, 16, 14, 9, 7, 10, 4, 1, 9, 10, 12,
4, 3, 1, 4, 7, 2, 8, 7, 2, 2, 1, 1, 2,		5, 0, 11, 7, 8, 3, 6, 15, 11, 11, 9,
5, 7, 5, 4, 0, 2, 0, 8, 4, 6, 8, 5, 9,	3, 17, 11, 3, 12, 11, 14, 9, 13, 6,	3, 17, 11, 3, 12, 11, 14, 9, 13, 6,
3, 2, 5, 1, 8, 8, 4, 4, 0, 2, 2, 3, 8, 8, 7, 8, 1, 1, 5, 2, 7, 5, 1, 3, 6, 0,	8, 16, 6, 13, 6, 12, 6, 9, 9, 6, 1, 2, 2, 12, 18, 3, 4, 0, 6, 8, 10, 8,	8, 16, 6, 13, 6, 12, 6, 9, 9, 6, 1, 2, 2, 12, 18, 3, 4, 0, 6, 8, 10, 8,
9, 0, 4, 4, 6, 4, 0, 2, 2, 8, 3, 0, 0,	10, 10, 5, 4, 1, 12, 11, 11, 17, 7,	10, 10, 5, 4, 1, 12, 11, 11, 17, 7,
0, 5, 3, 2, 8, 4, 9, 0, 8, 4, 4, 7, 9,	2, 8, 8, 8, 10, 6, 13, 5, 13, 7, 3,	2, 8, 8, 8, 10, 6, 13, 5, 13, 7, 3,
0, 6, 3, 1, 0, 5, 4, 6, 6, 8, 2, 2, 8,	6, 15, 13, 7, 12, 8, 17, 8, 3, 12, 8,	6, 15, 13, 7, 12, 8, 17, 8, 3, 12, 8,
8, 1, 5, 7, 2, 7, 4, 4, 3, 5, 1, 3, 9, 5, 0, 9, 6, 7, 8, 1, 6, 6, 8, 1, 2, 9,	16, 12, 13, 6, 9, 2, 11, 5, 9, 10, 8, 15, 9, 10, 9, 7, 16, 12, 6, 6, 8, 9,	16, 12, 13, 6, 9, 2, 11, 5, 9, 10, 8, 15, 9, 10, 9, 7, 16, 12, 6, 6, 8, 9,
1, 1, 4, 2, 2, 1, 7, 1, 1, 2, 1, 4, 7,	17, 5, 12, 11, 15, 11, 5, 11, 11, 11,	17, 5, 12, 11, 15, 11, 5, 11, 11, 11,
2, 0, 4, 5, 6, 8, 6, 7, 6, 7, 5, 0, 1,	11, 3, 5, 8, 13, 9, 11, 11, 7, 13, 6,	11, 3, 5, 8, 13, 9, 11, 11, 7, 13, 6,
4, 7, 3, 8, 5, 3, 0, 3, 2, 6, 0, 9, 4,	8, 13, 9, 9, 14, 2, 15, 6, 6, 2, 13, 10, 13, 13, 10, 10, 10, 15, 16, 1, 5,	8, 13, 9, 9, 14, 2, 15, 6, 6, 2, 13,
4, 5, 7, 5, 9, 9, 4, 8, 1, 6, 5, 9, 5, 2, 9, 1, 5, 4, 8, 7, 4, 7, 5, 6, 5, 8,	11, 3, 8, 4, 4, 10, 10, 1, 3, 18, 10,	10, 13, 13, 10, 10, 10, 15, 16, 1, 5, 11, 3, 8, 4, 4, 10, 10, 1, 3, 18, 10,
0, 5, 1, 1, 4, 8, 1, 1, 1, 8, 8, 7, 5,	6, 13, 14, 15, 8, 10, 10, 9, 10, 5,	6, 13, 14, 15, 8, 10, 10, 9, 10, 5,
9, 8, 1, 8, 6, 8, 7, 5, 0, 4, 1, 1, 5,	11, 16, 7, 8, 6, 2, 9, 1, 8, 3, 7, 3,	11, 16, 7, 8, 6, 2, 9, 1, 8, 3, 7, 3,
5, 7, 9, 4, 7, 0, 5, 1, 9, 1, 0, 6, 6, 2, 8, 1, 1, 3, 8, 3, 4, 8, 3, 4, 6, 6,	5, 13, 11, 10, 7, 11, 5, 13, 17, 13, 15, 12, 13, 9, 1, 4, 11, 8, 12, 16,	5, 13, 11, 10, 7, 11, 5, 13, 17, 13, 15, 12, 13, 9, 1, 4, 11, 8, 12, 16,
1, 2, 4, 8, 1, 4, 7, 6, 5, 8, 5, 8, 7,	13, 12, 8, 5, 4, 6, 0, 10, 5, 9, 11,	13, 12, 8, 5, 4, 6, 0, 10, 5, 9, 11,
5, 6, 4, 2, 2, 7, 6, 7, 5, 3, 5, 7, 4,	9, 10, 12, 18, 6, 8, 8, 12, 6, 9, 9,	9, 10, 12, 18, 6, 8, 8, 12, 6, 9, 9,
5, 0, 2, 9, 6, 2, 1, 9, 1, 4, 4, 3, 0,	4, 16, 3, 5, 4, 14, 9, 11, 11, 14, 6,	4, 16, 3, 5, 4, 14, 9, 11, 11, 14, 6,
6, 7, 6, 2, 7, 4, 6, 3, 1, 7, 7, 3, 3, 3, 0, 8, 6, 2, 5, 0, 2, 1, 1, 2, 1, 8,	13, 10, 7, 12, 8, 2, 11, 12, 2, 4, 8, 10, 13, 12, 8, 18, 8, 3, 13, 13, 8,	13, 10, 7, 12, 8, 2, 11, 12, 2, 4, 8, 10, 13, 12, 8, 18, 8, 3, 13, 13, 8,
4, 2, 4, 9, 8, 4, 6, 7, 9, 8, 3, 5, 2,	9, 9, 8, 7, 9, 10, 8, 10, 14, 17, 7,	9, 9, 8, 7, 9, 10, 8, 10, 14, 17, 7,
2, 9, 0, 5, 2, 4, 0, 9, 0, 4, 0, 2, 6,	9, 6, 10, 1, 10, 9, 9, 6, 8, 7, 11,	9, 6, 10, 1, 10, 9, 9, 6, 8, 7, 11,
0, 8, 6, 4, 0, 1, 1, 0, 6, 7, 2, 4, 6,	10, 9, 10, 17, 12, 13, 15, 7, 8, 15,	10, 9, 10, 17, 12, 13, 15, 7, 8, 15,
8, 5, 3, 2, 9, 1, 3, 4, 9, 0, 0, 2, 2,	12, 6, 6, 12, 8, 10, 4, 13, 8, 12,	12, 6, 6, 12, 8, 10, 4, 13, 8, 12,

Test	Expected	Got
4, 0, 1, 8, 3, 4, 1, 9, 0, 9, 4, 1, 7, 4, 1, 8, 7, 4, 7, 1, 2, 7, 9, 2, 4, 3, 9, 7, 2, 8, 9, 6, 3, 7, 7, 0, 2, 0, 1, 2, 4, 1, 8, 0, 3, 5, 6, 2, 4, 7, 9, 7,	13, 10, 9, 8, 11, 12, 7, 5, 3, 13, 8, 12, 10, 3, 9, 8, 11, 7, 7, 2, 14, 7, 2, 6, 12, 2, 12, 8, 9, 4, 9, 13, 7, 10, 11, 10, 8, 4, 5, 9, 9, 11, 5, 6,	13, 10, 9, 8, 11, 12, 7, 5, 3, 13, 8, 12, 10, 3, 9, 8, 11, 7, 7, 2, 14, 7, 2, 6, 12, 2, 12, 8, 9, 4, 9, 13, 7, 10, 11, 10, 8, 4, 5, 9, 9, 11, 5, 6,
0, 5, 7, 3, 8, 7, 2, 6, 7, 4, 5, 5, 8, 3, 7, 9, 7, 4, 7, 1, 3, 8, 7, 4, 4, 6, 2, 6, 9, 3, 5, 3, 9, 4, 8, 7, 3, 6, 2, 7, 7, 8, 1, 0, 1, 4, 7, 0, 2, 6, 3, 4,	1, 14, 11, 9, 7, 6, 11, 5, 6, 2, 3, 17, 13, 3, 5, 14, 8, 10, 8, 13, 10, 13, 5, 14, 3, 7, 10, 9, 14, 10, 8, 1, 10, 1, 4, 0, 9, 9, 8, 13, 7, 12, 7,	1, 14, 11, 9, 7, 6, 11, 5, 6, 2, 3, 17, 13, 3, 5, 14, 8, 10, 8, 13, 10, 13, 5, 14, 3, 7, 10, 9, 14, 10, 8, 1, 10, 1, 4, 0, 9, 9, 8, 13, 7, 12, 7,
3, 7, 4, 0, 3, 0, 2, 5, 0, 2, 4, 7, 1, 8, 4, 2, 8, 0, 7, 9, 4, 7, 7, 6, 2, 5, 8, 5, 7, 4, 4, 5, 3, 4, 6, 5, 2, 4, 5, 0, 4, 5, 1, 1, 2, 1, 6, 8, 1, 1, 2, 4,	10, 7, 6, 9, 13, 10, 5, 15, 11, 6, 6, 5, 12, 1, 5, 4, 18, 8, 2, 8, 2, 11, 0, 8, 15, 6, 7, 3, 15, 1, 17, 8, 3, 8, 12, 10, 10, 15, 8, 13, 1, 2, 14,	10, 7, 6, 9, 13, 10, 5, 15, 11, 6, 6, 5, 12, 1, 5, 4, 18, 8, 2, 8, 2, 11, 0, 8, 15, 6, 7, 3, 15, 1, 17, 8, 3, 8, 12, 10, 10, 15, 8, 13, 1, 2, 14,
0, 5, 6, 1, 9, 6, 0, 5, 5, 0, 9, 5, 9, 5, 3, 8, 8, 7, 2, 2, 1, 4, 1, 4, 9, 3, 2, 8, 8, 3, 6, 9, 1, 7, 0, 1, 8, 7, 2, 6, 0, 2, 3, 5, 5, 1, 6, 9, 1, 7, 4, 9,	14, 8, 9, 12, 17, 15, 2, 14, 9, 7, 4, 7, 13, 6, 7, 0, 5, 6, 11, 9, 8, 4, 9, 8, 12, 11, 9, 7, 12, 15, 8, 13, 9, 8, 10, 15, 10, 10, 7, 4, 7, 7, 12, 4,	14, 8, 9, 12, 17, 15, 2, 14, 9, 7, 4, 7, 13, 6, 7, 0, 5, 6, 11, 9, 8, 4, 9, 8, 12, 11, 9, 7, 12, 15, 8, 13, 9, 8, 10, 15, 10, 10, 7, 4, 7, 7, 12, 4, 10, 15, 10, 10, 17, 4, 7, 7, 12, 4, 10, 15, 10, 10, 17, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10
0, 4, 8, 1, 6, 7, 5, 1, 1, 8, 8, 2, 4, 9, 3, 5, 3, 7, 1, 7, 3, 3, 7, 1, 3, 5, 1, 7, 2, 2, 4, 5, 7, 7, 3, 4, 4, 9, 7, 2, 6, 9, 5, 6, 5, 7, 0, 4, 1, 4, 4, 7, 2, 0, 8, 0, 5, 1, 2, 5, 9, 0, 6, 7, 5,	10, 15, 9, 12, 14, 7, 10, 16, 14, 6, 11, 11, 8, 8, 10, 4, 7, 9, 9, 9, 8, 15, 12, 7, 3, 12, 13, 16, 10, 1, 3, 7, 15, 1, 2, 9, 10, 13, 4, 7, 10, 2, 6, 0, 8, 7, 2, 10, 5, 12, 1, 10, 11,	10, 15, 9, 12, 14, 7, 10, 16, 14, 6, 11, 11, 8, 8, 10, 4, 7, 9, 9, 9, 8, 15, 12, 7, 3, 12, 13, 16, 10, 1, 3, 7, 15, 1, 2, 9, 10, 13, 4, 7, 10, 2, 6, 0, 8, 7, 2, 10, 5, 12, 1, 10, 11,
5, 0, 2, 2, 1, 0, 6, 1, 0, 1, 2, 6, 6, 4, 6, 8, 4, 0, 0, 0, 9, 8, 5, 7, 1, 8, 9, 5, 8, 1, 2, 0, 9, 6, 4, 4, 6, 5, 5, 5, 1, 5, 0, 5, 4, 3, 4, 2, 4, 1, 3, 9,	6, 9, 6, 8, 14, 4, 15, 8, 13, 7, 5, 10, 11, 10, 8, 11, 5, 5, 6, 15, 10, 7, 5, 11, 0, 9, 13, 1, 7, 6, 9, 10, 13, 10, 2, 2, 9, 7, 14, 10, 7, 9, 9,	6, 9, 6, 8, 14, 4, 15, 8, 13, 7, 5, 10, 11, 10, 8, 11, 5, 5, 6, 15, 10, 7, 5, 11, 0, 9, 13, 1, 7, 6, 9, 10, 13, 10, 2, 2, 9, 7, 14, 10, 7, 9, 9,
8, 4, 4, 0, 9, 6, 7, 8, 0, 8, 2, 8, 3, 5, 2, 4, 7, 5, 9, 8, 2, 0, 9, 0, 6, 3, 5, 7, 4, 4, 7, 4, 0, 0, 0, 6, 9, 0, 2, 5, 8, 6, 4, 1, 7, 3, 3, 5, 2, 6, 5, 1, 0, 5, 2, 0, 0, 1, 5, 1, 8, 9, 2, 1, 7	0, 14, 8, 9, 15, 7, 18, 11, 12, 8, 11, 9, 7, 11, 3, 5, 5, 8, 14, 5, 8, 15, 16, 5, 15, 16, 6, 12, 0, 2, 17, 7, 11, 9, 3, 9, 7, 6, 5, 1, 7, 11, 6, 15, 16, 16, 16, 16, 16, 17, 5, 3, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18	0, 14, 8, 9, 15, 7, 18, 11, 12, 8, 11, 9, 7, 11, 3, 5, 5, 8, 14, 5, 8, 15, 16, 5, 15, 16, 6, 12, 0, 2, 17, 7, 11, 9, 3, 9, 7, 6, 5, 1, 7, 11, 6,
0, 5, 2, 0, 0, 1, 5, 1, 8, 9, 2, 1, 7, 8, 7, 0, 6, 4, 7, 8, 9, 4, 1, 7, 1, 0, 6, 2, 1, 4, 8, 1, 5, 9, 5, 2, 2, 3, 7, 5, 7, 3, 5, 5, 3, 9, 0, 3, 5, 3, 9, 6, 8, 9, 7, 1, 8, 3, 1, 9, 5, 2, 4, 6, 1,	15, 10, 16, 1, 6, 16, 9, 15, 7, 5, 3, 4, 11, 11, 8, 6, 11, 3, 14, 8, 10, 10, 8, 9, 8, 13, 1, 6, 13, 6, 7, 7, 6, 6, 10, 16, 8, 4, 8, 13, 10, 13, 7, 15, 15, 14, 11, 11, 15, 5, 5, 9, 12,	15, 10, 16, 1, 6, 16, 9, 15, 7, 5, 3, 4, 11, 11, 8, 6, 11, 3, 14, 8, 10, 10, 8, 9, 8, 13, 1, 6, 13, 6, 7, 7, 6, 6, 10, 16, 8, 4, 8, 13, 10, 13, 7, 15, 15, 14, 11, 11, 15, 5, 5, 9, 12,
9, 5, 6, 3, 2, 6, 6, 8, 4, 1, 6, 7, 8, 2, 7, 8, 9, 6, 5, 9, 0, 3, 3, 3, 6, 3, 3, 6, 2, 2, 0, 0, 4, 2, 1, 9, 5, 4, 6, 3, 3, 4, 7, 7, 8, 3, 8, 5, 5, 5, 2, 8, 0,	8, 15, 6, 3, 10, 0, 12, 4, 2, 13, 10, 0, 11, 9, 14, 7, 5, 9, 7, 2, 5, 10, 2, 2, 8, 11, 8, 7, 6, 10, 16, 13, 9, 7, 9, 16, 9, 7, 9, 10, 8, 18, 6, 14,	8, 15, 6, 3, 10, 0, 12, 4, 2, 13, 10, 0, 11, 9, 14, 7, 5, 9, 7, 2, 5, 10, 2, 2, 8, 11, 8, 7, 6, 10, 16, 13, 9, 7, 9, 16, 9, 7, 9, 10, 8, 18, 6, 14,
1, 5, 2, 0, 3, 9, 4, 0, 1, 1, 7, 0, 9, 5, 5, 8, 9, 8, 4, 8, 3, 3, 8, 1, 4, 0, 3, 7, 8, 5, 1, 2, 5, 2, 0, 1, 3, 9, 6, 3, 2, 7, 9, 8, 9, 5, 0, 8, 9, 2, 8, 5, 9, 8, 5, 6, 6, 8, 7, 4, 1, 9, 4, 7, 7,	2, 3, 0, 16, 10, 4, 5, 12, 8, 8, 11, 8, 12, 5, 12, 7, 8, 12, 2, 4, 4, 10, 18, 15, 10, 11, 4, 16, 12, 16, 11, 0, 10, 4, 11, 4, 14, 10, 8, 12, 5, 11, 15, 5, 1, 17, 9, 12, 9, 5, 11, 8, 11,	2, 3, 0, 16, 10, 4, 5, 12, 8, 8, 11, 8, 12, 5, 12, 7, 8, 12, 2, 4, 4, 10, 18, 15, 10, 11, 4, 16, 12, 16, 11, 0, 10, 4, 11, 4, 14, 10, 8, 12, 5, 11, 15, 5, 1, 17, 9, 12, 9, 5, 11, 8, 11,
5, 2, 6, 8, 5, 3, 0, 2, 7, 5, 7, 0, 6, 2, 8, 7, 9, 0, 1, 0, 8, 0, 8, 3, 1, 6, 0, 1, 8, 5}; LLNode* head =	8, 8, 9, 7, 2, 10, 9, 1, 2, 8, 16, 10, 13, 8, 9, 10, 5, 13, 8, 10, 13, 3, 0, 8, 7, 8, 0, 7, 9, 2, 13, 16, 7, 2, 11, 14, 7, 2, 10, 9, 10, 17, 12,	8, 8, 9, 7, 2, 10, 9, 1, 2, 8, 16, 10, 13, 8, 9, 10, 5, 13, 8, 10, 13, 3, 0, 8, 7, 8, 0, 7, 9, 2, 13, 16, 7, 2, 11, 14, 7, 2, 10, 9, 10, 17, 12,
<pre>LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead =</pre>	9, 7, 14, 4, 3, 11, 7, 1, 6, 8, 2, 11, 14, 10, 6, 7, 9, 16, 6, 15, 11, 7, 8, 6, 9, 5, 11, 10, 8, 10, 13, 9, 9, 14, 9, 9, 4, 7, 15, 6, 10, 7, 9, 10, 10, 13, 10, 7, 9, 7, 14, 14, 13,	9, 7, 14, 4, 3, 11, 7, 1, 6, 8, 2, 11, 14, 10, 6, 7, 9, 16, 6, 15, 11, 7, 8, 6, 9, 5, 11, 10, 8, 10, 13, 9, 9, 14, 9, 9, 4, 7, 15, 6, 10, 7, 9, 10, 10, 13, 10, 7, 9, 7, 14, 14, 13,
<pre>foldLinkedList(head); LLNode::printList(newhead);</pre>	6, 12, 7, 15, 6, 16, 10, 17, 15, 7, 9, 2, 8, 10, 3, 7, 7, 8, 8, 6, 8, 2, 1, 5, 11, 5, 16, 12, 11, 15, 6, 9, 7, 11, 7, 15, 7, 10, 9, 11, 2, 15, 7, 3, 7, 6, 8, 8, 11, 10, 7, 10, 2, 11, 7,	6, 12, 7, 15, 6, 16, 10, 17, 15, 7, 9, 2, 8, 10, 3, 7, 7, 8, 8, 6, 8, 2, 1, 5, 11, 5, 16, 12, 11, 15, 6, 9, 7, 11, 7, 15, 7, 10, 9, 11, 2, 15, 7, 3,
	18, 7, 13, 12, 15, 14, 8, 11, 5, 4, 14, 10, 8, 8, 6, 8, 8, 7, 7, 8, 11, 7, 3, 6, 10, 11, 14, 3, 4, 11, 11, 17, 13, 10, 3, 13, 13, 2, 15, 9, 16,	7, 6, 8, 8, 11, 10, 7, 10, 2, 11, 7, 18, 7, 13, 12, 15, 14, 8, 11, 5, 4, 14, 10, 8, 8, 6, 8, 8, 7, 7, 8, 11, 7, 3, 6, 10, 11, 14, 3, 4, 11, 11, 17, 13, 10, 3, 13, 13, 2, 15, 9, 16, 12, 0, 12, 0, 17, 12, 4, 2, 18, 5
	12, 9, 13, 9, 17, 13, 4, 3, 18, 5, 16, 7, 11, 6, 7, 13, 10, 4, 9, 9, 15, 5, 12, 7, 7, 6, 14, 14, 13, 7, 9, 9, 13, 6, 8, 10, 3, 7, 1, 4, 8, 12]	12, 9, 13, 9, 17, 13, 4, 3, 18, 5, 16, 7, 11, 6, 7, 13, 10, 4, 9, 9, 15, 5, 12, 7, 7, 6, 14, 14, 13, 7, 9, 9, 13, 6, 8, 10, 3, 7, 1, 4, 8, 12]

~	Test	Expected	Got	~
	int arr[] = {9, 0, 8, 2, 4, 9, 4, 3,	[9, 0, 8, 2, 4, 9, 4, 3, 0, 8, 2, 8,	[9, 0, 8, 2, 4, 9, 4, 3, 0, 8, 2, 8,	
	0, 8, 2, 8, 4, 5, 7, 5, 9, 2, 2, 4, 0,	4, 5, 7, 5, 9, 2, 2, 4, 0, 4, 2, 3,	4, 5, 7, 5, 9, 2, 2, 4, 0, 4, 2, 3,	
	4, 2, 3, 6, 6, 2, 3, 2, 9, 4, 6, 5, 7,	6, 6, 2, 3, 2, 9, 4, 6, 5, 7, 0, 6,	6, 6, 2, 3, 2, 9, 4, 6, 5, 7, 0, 6,	
	0, 6, 6, 7, 3, 4, 1, 7, 2, 6, 7, 5, 7,	6, 7, 3, 4, 1, 7, 2, 6, 7, 5, 7, 5,	6, 7, 3, 4, 1, 7, 2, 6, 7, 5, 7, 5,	
	5, 9, 8, 5, 4, 0, 6, 8, 2, 8, 2, 7, 8,	9, 8, 5, 4, 0, 6, 8, 2, 8, 2, 7, 8,	9, 8, 5, 4, 0, 6, 8, 2, 8, 2, 7, 8,	
	6, 8, 3, 0, 3, 5, 8, 5, 2, 1, 5, 2, 5,		6, 8, 3, 0, 3, 5, 8, 5, 2, 1, 5, 2,	
	6, 5, 2, 4, 1, 0, 2, 8, 2, 9, 8, 2, 1,	5, 6, 5, 2, 4, 1, 0, 2, 8, 2, 9, 8,	5, 6, 5, 2, 4, 1, 0, 2, 8, 2, 9, 8,	
	0, 5, 8, 0, 5, 9, 0, 8, 7, 6, 9, 9, 4,		2, 1, 0, 5, 8, 0, 5, 9, 0, 8, 7, 6,	
	3, 4, 6, 0, 0, 6, 9, 6, 2, 0, 6, 8, 5, 7, 2, 4, 3, 8, 2, 3, 5, 3, 9, 1, 6, 1,	9, 9, 4, 3, 4, 6, 0, 0, 6, 9, 6, 2, 0, 6, 8, 5, 7, 2, 4, 3, 8, 2, 3, 5,	9, 9, 4, 3, 4, 6, 0, 0, 6, 9, 6, 2, 0, 6, 8, 5, 7, 2, 4, 3, 8, 2, 3, 5,	
	8, 7, 8, 0, 4, 6, 7, 2, 6, 8, 0, 7, 9,		3, 9, 1, 6, 1, 8, 7, 8, 0, 4, 6, 7,	
	2, 0, 3, 7, 7, 6, 6, 1, 5, 7, 9, 4, 5,		2, 6, 8, 0, 7, 9, 2, 0, 3, 7, 7, 6,	
	4, 5, 0, 7, 5, 6, 0, 8, 7, 8, 1, 4, 5,		6, 1, 5, 7, 9, 4, 5, 4, 5, 0, 7, 5,	
	9, 0, 7, 6, 9, 7, 0, 2, 1, 5, 1, 9, 7,	6, 0, 8, 7, 8, 1, 4, 5, 9, 0, 7, 6,	6, 0, 8, 7, 8, 1, 4, 5, 9, 0, 7, 6,	
	0, 9, 3, 5, 8, 6, 0, 4, 2, 4, 6, 5, 0,	9, 7, 0, 2, 1, 5, 1, 9, 7, 0, 9, 3,	9, 7, 0, 2, 1, 5, 1, 9, 7, 0, 9, 3,	
	9, 5, 8, 6, 2, 6, 7, 5, 9, 2, 9, 0, 3,	5, 8, 6, 0, 4, 2, 4, 6, 5, 0, 9, 5,	5, 8, 6, 0, 4, 2, 4, 6, 5, 0, 9, 5,	
	4, 3, 5, 2, 6, 7, 6, 5, 4, 4, 7, 2, 5,	8, 6, 2, 6, 7, 5, 9, 2, 9, 0, 3, 4,	8, 6, 2, 6, 7, 5, 9, 2, 9, 0, 3, 4,	
	1, 6, 8, 7, 8, 7, 8, 0, 0, 4, 0, 2, 6,	3, 5, 2, 6, 7, 6, 5, 4, 4, 7, 2, 5,	3, 5, 2, 6, 7, 6, 5, 4, 4, 7, 2, 5,	
	4, 0, 8, 8, 5, 5, 7, 7, 8, 8, 7, 4, 8,		1, 6, 8, 7, 8, 7, 8, 0, 0, 4, 0, 2,	
	7, 2, 9, 8, 6, 9, 7, 8, 6, 4, 9, 6, 9,	6, 4, 0, 8, 8, 5, 5, 7, 7, 8, 8, 7,	6, 4, 0, 8, 8, 5, 5, 7, 7, 8, 8, 7,	
	8, 4, 2, 4, 3, 1, 7, 0, 0, 1, 3, 4, 7,	4, 8, 7, 2, 9, 8, 6, 9, 7, 8, 6, 4,	4, 8, 7, 2, 9, 8, 6, 9, 7, 8, 6, 4,	
	2, 6, 7, 4, 4, 4, 9, 5, 2, 2, 0, 2, 9,	9, 6, 9, 8, 4, 2, 4, 3, 1, 7, 0, 0,	9, 6, 9, 8, 4, 2, 4, 3, 1, 7, 0, 0,	
	7, 3, 8, 0, 1, 3, 7, 7, 5, 2, 7, 1, 4, 5, 0, 3, 3, 9, 1, 8, 6, 7, 1, 0, 1, 3,	1, 3, 4, 7, 2, 6, 7, 4, 4, 4, 9, 5, 2, 2, 0, 2, 9, 7, 3, 8, 0, 1, 3, 7,	1, 3, 4, 7, 2, 6, 7, 4, 4, 4, 9, 5, 2, 2, 0, 2, 9, 7, 3, 8, 0, 1, 3, 7,	
	9, 0, 1, 7, 4, 3, 8, 0, 5, 0, 0, 3, 8,		7, 5, 2, 7, 1, 4, 5, 0, 3, 3, 9, 1,	
	1, 2, 4, 6, 6, 9, 3, 8, 9, 4, 3, 0, 3,	8, 6, 7, 1, 0, 1, 3, 9, 0, 1, 7, 4,	8, 6, 7, 1, 0, 1, 3, 9, 0, 1, 7, 4,	
	1, 6, 9, 7, 0, 5, 4, 9, 6, 0, 8, 3, 6,	3, 8, 0, 5, 0, 0, 3, 8, 1, 2, 4, 6,	3, 8, 0, 5, 0, 0, 3, 8, 1, 2, 4, 6,	
	5, 0, 6, 4, 4, 1, 6, 1, 2, 9, 4, 4, 9,	6, 9, 3, 8, 9, 4, 3, 0, 3, 1, 6, 9,	6, 9, 3, 8, 9, 4, 3, 0, 3, 1, 6, 9,	
	0, 2, 2, 4, 8, 8, 4, 0, 7, 5, 2, 3, 9,	7, 0, 5, 4, 9, 6, 0, 8, 3, 6, 5, 0,	7, 0, 5, 4, 9, 6, 0, 8, 3, 6, 5, 0,	
	1, 8, 6, 8, 1, 4, 8, 4, 4, 7, 0, 1, 9,	6, 4, 4, 1, 6, 1, 2, 9, 4, 4, 9, 0,	6, 4, 4, 1, 6, 1, 2, 9, 4, 4, 9, 0,	
	0, 6, 3, 0, 2, 2, 9, 0, 4, 9, 3, 3, 8,	2, 2, 4, 8, 8, 4, 0, 7, 5, 2, 3, 9,	2, 2, 4, 8, 8, 4, 0, 7, 5, 2, 3, 9,	
	3, 3, 8, 6, 4, 8, 3, 2, 9, 7, 3, 9, 1,		1, 8, 6, 8, 1, 4, 8, 4, 4, 7, 0, 1,	
	4, 8, 0, 9, 3, 6, 2, 4, 0, 8, 1, 3, 1,	9, 0, 6, 3, 0, 2, 2, 9, 0, 4, 9, 3,	9, 0, 6, 3, 0, 2, 2, 9, 0, 4, 9, 3,	
	5, 6, 9, 5, 8, 5, 4, 0, 2, 7, 3, 0, 5, 1, 9, 8, 0, 0, 0, 5, 1, 2, 1, 1, 1, 3,	3, 8, 3, 3, 8, 6, 4, 8, 3, 2, 9, 7, 3, 9, 1, 4, 8, 0, 9, 3, 6, 2, 4, 0,	3, 8, 3, 3, 8, 6, 4, 8, 3, 2, 9, 7, 3, 9, 1, 4, 8, 0, 9, 3, 6, 2, 4, 0,	
	3, 1, 4, 0, 8, 4, 9, 2, 8, 0, 2, 2, 8,	8, 1, 3, 1, 5, 6, 9, 5, 8, 5, 4, 0,	8, 1, 3, 1, 5, 6, 9, 5, 8, 5, 4, 0,	
	6, 5, 4, 9, 7, 5, 2, 6, 3, 8, 1, 1, 7,	2, 7, 3, 0, 5, 1, 9, 8, 0, 0, 0, 5,	2, 7, 3, 0, 5, 1, 9, 8, 0, 0, 0, 5,	
	7, 6, 0, 7, 3, 6, 4, 2, 2, 7, 4, 8, 3,		1, 2, 1, 1, 1, 3, 3, 1, 4, 0, 8, 4,	
	3, 5, 3, 1, 9, 6, 9, 6, 0, 2, 0, 6, 4,	9, 2, 8, 0, 2, 2, 8, 6, 5, 4, 9, 7,	9, 2, 8, 0, 2, 2, 8, 6, 5, 4, 9, 7,	
	4, 8, 7, 1, 7, 9, 2, 9, 2, 5, 8, 6, 4,	5, 2, 6, 3, 8, 1, 1, 7, 7, 6, 0, 7,	5, 2, 6, 3, 8, 1, 1, 7, 7, 6, 0, 7,	
	3, 7, 2, 3, 5, 6, 8, 9, 4, 1, 7, 6, 1,	3, 6, 4, 2, 2, 7, 4, 8, 3, 3, 5, 3,	3, 6, 4, 2, 2, 7, 4, 8, 3, 3, 5, 3,	
	6, 4, 2, 1, 6, 1, 1, 1, 7, 9, 3, 0, 1,	1, 9, 6, 9, 6, 0, 2, 0, 6, 4, 4, 8,	1, 9, 6, 9, 6, 0, 2, 0, 6, 4, 4, 8,	
	8, 5, 1, 1, 0, 5, 4, 2, 8, 5, 7, 4, 1,	7, 1, 7, 9, 2, 9, 2, 5, 8, 6, 4, 3,	7, 1, 7, 9, 2, 9, 2, 5, 8, 6, 4, 3,	
	2, 8, 7, 4, 0, 1, 1, 6, 0, 9, 5, 4, 5,	7, 2, 3, 5, 6, 8, 9, 4, 1, 7, 6, 1,	7, 2, 3, 5, 6, 8, 9, 4, 1, 7, 6, 1,	
	0, 5, 4, 4, 4, 4, 2, 9, 3, 1, 5, 1, 3,		6, 4, 2, 1, 6, 1, 1, 1, 7, 9, 3, 0,	
	7, 4, 0, 7, 7, 0, 1, 0, 1, 1, 5, 5, 1, 1, 4, 4, 1, 8, 4, 2, 6, 8, 6, 5, 7,	1, 8, 5, 1, 1, 0, 5, 4, 2, 8, 5, 7, 4, 1, 2, 8, 7, 4, 0, 1, 1, 6, 0, 9,	1, 8, 5, 1, 1, 0, 5, 4, 2, 8, 5, 7, 4, 1, 2, 8, 7, 4, 0, 1, 1, 6, 0, 9,	
	2, 1, 5, 6, 5, 9, 6, 2, 5, 3, 7, 4, 2,	5, 4, 5, 0, 5, 4, 4, 4, 4, 2, 9, 3,	5, 4, 5, 0, 5, 4, 4, 4, 4, 2, 9, 3,	
	4, 2, 9, 2, 6, 6, 0, 0, 7, 6, 4, 8, 5,		1, 5, 1, 3, 7, 4, 0, 7, 7, 7, 0, 1,	
	3, 9, 8, 0, 3, 6, 9, 4, 1, 7, 0, 2, 3,		0, 1, 1, 5, 5, 1, 1, 4, 4, 1, 8, 4,	
	4, 2, 0, 9, 3, 7, 1, 7, 9, 3, 2, 3, 6,		2, 6, 8, 6, 5, 7, 2, 1, 5, 6, 5, 9,	
	5, 8, 1, 8, 2, 6, 1, 9, 2, 8, 5, 3, 1,	6, 2, 5, 3, 7, 4, 2, 4, 2, 9, 2, 6,	6, 2, 5, 3, 7, 4, 2, 4, 2, 9, 2, 6,	
	6, 5, 9, 2, 9, 7, 7, 5, 1, 4, 8, 2, 6,	6, 0, 0, 7, 6, 4, 8, 5, 3, 9, 8, 0,	6, 0, 0, 7, 6, 4, 8, 5, 3, 9, 8, 0,	
	6, 8, 7, 0, 9, 8, 0, 0, 1, 4, 1, 1, 1,	3, 6, 9, 4, 1, 7, 0, 2, 3, 4, 2, 0,	3, 6, 9, 4, 1, 7, 0, 2, 3, 4, 2, 0,	
	2, 3, 3, 1, 4, 1, 1, 1, 6, 0, 9, 6, 1,		9, 3, 7, 1, 7, 9, 3, 2, 3, 6, 5, 8,	
	3, 0, 6, 0, 0, 8, 3, 8, 9, 0, 6, 3, 1,		1, 8, 2, 6, 1, 9, 2, 8, 5, 3, 1, 6,	
	9, 8, 6, 8, 1, 4, 1, 6, 9, 7, 0, 3, 1,	5, 9, 2, 9, 7, 7, 5, 1, 4, 8, 2, 6,	5, 9, 2, 9, 7, 7, 5, 1, 4, 8, 2, 6,	
	2, 1, 9, 0, 6, 7, 3, 7, 1, 4, 5, 5, 2,	6, 8, 7, 0, 9, 8, 0, 0, 1, 4, 1, 1,	6, 8, 7, 0, 9, 8, 0, 0, 1, 4, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	
	8, 1, 4, 2, 2, 0, 7, 6, 0, 9, 6, 1, 0, 1, 7, 5, 2, 7, 8, 9, 0, 4, 2, 2, 4, 9,	1, 2, 3, 3, 1, 4, 1, 1, 1, 6, 0, 9, 6, 1, 3, 0, 6, 0, 0, 8, 3, 8, 9, 0,	1, 2, 3, 3, 1, 4, 1, 1, 1, 6, 0, 9, 6, 1, 3, 0, 6, 0, 0, 8, 3, 8, 9, 0,	
	8, 1, 3, 5, 0, 7, 1, 0, 4, 3, 3, 7, 4,		6, 3, 1, 9, 8, 6, 8, 1, 4, 1, 6, 9,	
	3, 9, 6, 5, 3, 2, 9, 1, 9, 0, 4, 6, 1,	7, 0, 3, 1, 2, 1, 9, 0, 6, 7, 3, 7,	7, 0, 3, 1, 2, 1, 9, 0, 6, 7, 3, 7,	
	6, 5, 1, 6, 9, 0, 3, 2, 2, 9, 0, 1, 6,	1, 4, 5, 5, 2, 8, 1, 4, 2, 2, 0, 7,	1, 4, 5, 5, 2, 8, 1, 4, 2, 2, 0, 7,	
	3, 4, 6, 7, 8, 2, 9, 7, 8, 8, 4, 6, 2,		6, 0, 9, 6, 1, 0, 1, 7, 5, 2, 7, 8,	
	6, 4, 4, 9, 9, 0, 4, 4, 7, 3, 5, 1, 7,		9, 0, 4, 2, 2, 4, 9, 8, 1, 3, 5, 0,	

Test	Expected	Got
5, 7, 2, 3, 0, 3, 8, 1, 9, 6, 1, 5, 3,	7, 1, 0, 4, 3, 3, 7, 4, 3, 9, 6, 5,	7, 1, 0, 4, 3, 3, 7, 4, 3, 9, 6, 5,
7, 2, 6, 6, 3, 9, 0, 5, 3, 9, 6, 1, 6,	3, 2, 9, 1, 9, 0, 4, 6, 1, 6, 5, 1,	3, 2, 9, 1, 9, 0, 4, 6, 1, 6, 5, 1,
8, 7, 4, 5, 4, 7, 1, 7, 6, 0, 8, 0, 2,	6, 9, 0, 3, 2, 2, 9, 0, 1, 6, 3, 4,	6, 9, 0, 3, 2, 2, 9, 0, 1, 6, 3, 4,
1, 0, 1, 6, 9, 8, 9, 7, 7, 0, 0, 9, 9,	6, 7, 8, 2, 9, 7, 8, 8, 4, 6, 2, 6,	6, 7, 8, 2, 9, 7, 8, 8, 4, 6, 2, 6,
6, 5, 0, 1, 2, 5, 0, 8, 8, 6, 5, 7, 0,	4, 4, 9, 9, 0, 4, 4, 7, 3, 5, 1, 7,	4, 4, 9, 9, 0, 4, 4, 7, 3, 5, 1, 7,
3, 4, 4, 2, 3, 8, 4, 6, 6, 6, 1, 9, 7,	5, 7, 2, 3, 0, 3, 8, 1, 9, 6, 1, 5,	5, 7, 2, 3, 0, 3, 8, 1, 9, 6, 1, 5,
9, 4, 0, 0, 4, 5, 3, 3, 0, 7, 7, 7, 9,	3, 7, 2, 6, 6, 3, 9, 0, 5, 3, 9, 6,	3, 7, 2, 6, 6, 3, 9, 0, 5, 3, 9, 6,
0, 1, 4, 9, 6, 2, 6, 5, 6, 3, 0, 8, 9,	1, 6, 8, 7, 4, 5, 4, 7, 1, 7, 6, 0,	1, 6, 8, 7, 4, 5, 4, 7, 1, 7, 6, 0,
4, 4, 2, 7, 0, 8, 6, 7, 2, 6, 1, 8, 1,	8, 0, 2, 1, 0, 1, 6, 9, 8, 9, 7, 7,	8, 0, 2, 1, 0, 1, 6, 9, 8, 9, 7, 7,
8, 1, 5, 9, 7, 9, 8, 5, 2, 7, 6, 8, 8,	0, 0, 9, 9, 6, 5, 0, 1, 2, 5, 0, 8,	0, 0, 9, 9, 6, 5, 0, 1, 2, 5, 0, 8,
5, 9, 1, 4, 2, 0, 6, 8, 5, 1, 8, 1, 4,	8, 6, 5, 7, 0, 3, 4, 4, 2, 3, 8, 4,	8, 6, 5, 7, 0, 3, 4, 4, 2, 3, 8, 4,
0, 5, 0, 7, 3, 6, 1, 3, 9, 0, 1, 7, 2,	6, 6, 6, 1, 9, 7, 9, 4, 0, 0, 4, 5,	6, 6, 6, 1, 9, 7, 9, 4, 0, 0, 4, 5,
8, 5, 2, 1, 0, 5, 9, 5, 8, 1, 5, 1, 8,	3, 3, 0, 7, 7, 7, 9, 0, 1, 4, 9, 6,	3, 3, 0, 7, 7, 7, 9, 0, 1, 4, 9, 6,
6, 3, 3, 5, 6, 9, 7, 5, 1, 4, 1, 4, 7,	2, 6, 5, 6, 3, 0, 8, 9, 4, 4, 2, 7,	2, 6, 5, 6, 3, 0, 8, 9, 4, 4, 2, 7,
4, 9, 2, 8, 9, 0, 2, 4, 7, 1, 2, 5, 8,	0, 8, 6, 7, 2, 6, 1, 8, 1, 8, 1, 5,	0, 8, 6, 7, 2, 6, 1, 8, 1, 8, 1, 5,
7, 5, 4, 4, 6, 1, 9, 9, 5, 7, 7, 3, 8,	9, 7, 9, 8, 5, 2, 7, 6, 8, 8, 5, 9,	9, 7, 9, 8, 5, 2, 7, 6, 8, 8, 5, 9,
7, 7, 2, 4, 4, 9, 2, 8, 5, 3, 1, 6, 7,	1, 4, 2, 0, 6, 8, 5, 1, 8, 1, 4, 0,	1, 4, 2, 0, 6, 8, 5, 1, 8, 1, 4, 0,
0, 4, 0, 1, 2, 4, 7, 8, 5, 0, 2, 3, 5, 0, 3, 0, 1, 5, 0, 7, 0, 2, 3, 8, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,	5, 0, 7, 3, 6, 1, 3, 9, 0, 1, 7, 2,	5, 0, 7, 3, 6, 1, 3, 9, 0, 1, 7, 2, 8, 5, 2, 1, 0, 5, 9, 5, 8, 1, 5, 1,
9, 3, 9, 1, 5, 0, 7, 0, 2, 3, 8, 8, 9, 	8, 5, 2, 1, 0, 5, 9, 5, 8, 1, 5, 1,	
5, 2, 3, 5, 0, 1, 4, 1, 9, 3, 7, 3, 3, 1, 6, 5, 7, 6, 6, 5, 5, 9, 2, 8, 2, 5,	8, 6, 3, 3, 5, 6, 9, 7, 5, 1, 4, 1, 4, 7, 4, 9, 2, 8, 9, 0, 2, 4, 7, 1,	8, 6, 3, 3, 5, 6, 9, 7, 5, 1, 4, 1, 4, 7, 4, 9, 2, 8, 9, 0, 2, 4, 7, 1,
5, 4, 2, 8, 8, 9, 8, 6, 3, 0, 1, 9, 7,	2, 5, 8, 7, 5, 4, 4, 6, 1, 9, 9, 5,	2, 5, 8, 7, 5, 4, 4, 6, 1, 9, 9, 5,
3, 8, 8, 0, 2, 0, 1, 7, 8, 3, 8, 3, 5,	7, 7, 3, 8, 7, 7, 2, 4, 4, 9, 2, 8,	7, 7, 3, 8, 7, 7, 2, 4, 4, 9, 2, 8,
5, 1, 7, 5, 8, 2, 3, 6, 9, 9, 6, 3, 0,	5, 3, 1, 6, 7, 0, 4, 0, 1, 2, 4, 7,	5, 3, 1, 6, 7, 0, 4, 0, 1, 2, 4, 7,
9, 7, 8, 9, 8, 6, 7, 0, 1, 8, 6, 3, 2,	8, 5, 0, 2, 3, 5, 9, 3, 9, 1, 5, 0,	8, 5, 0, 2, 3, 5, 9, 3, 9, 1, 5, 0,
8, 2, 9, 0, 6, 4, 8, 3, 7, 8, 9, 0, 4,	7, 0, 2, 3, 8, 8, 9, 5, 2, 3, 5, 0,	7, 0, 2, 3, 8, 8, 9, 5, 2, 3, 5, 0,
4, 0, 8, 0, 4, 9, 5, 8, 7, 7, 4, 8, 1,	1, 4, 1, 9, 3, 7, 3, 3, 1, 6, 5, 7,	1, 4, 1, 9, 3, 7, 3, 3, 1, 6, 5, 7,
3, 3, 1, 6, 7, 4, 8, 3, 9, 5, 9, 8, 8,	6, 6, 5, 5, 9, 2, 8, 2, 5, 5, 4, 2,	6, 6, 5, 5, 9, 2, 8, 2, 5, 5, 4, 2,
0, 3, 2, 1, 6, 8, 9, 3, 7, 4, 1, 7, 8,	8, 8, 9, 8, 6, 3, 0, 1, 9, 7, 3, 8,	8, 8, 9, 8, 6, 3, 0, 1, 9, 7, 3, 8,
3, 8, 2, 7, 3, 0, 8, 2, 5, 9, 7, 0, 4,	8, 0, 2, 0, 1, 7, 8, 3, 8, 3, 5, 5,	8, 0, 2, 0, 1, 7, 8, 3, 8, 3, 5, 5,
2, 7, 9, 8, 9, 5, 1, 0, 8, 8, 6, 4, 9,	1, 7, 5, 8, 2, 3, 6, 9, 9, 6, 3, 0,	1, 7, 5, 8, 2, 3, 6, 9, 9, 6, 3, 0,
0, 0, 9, 4, 8, 9, 8, 8, 6, 8, 2, 7, 8,	9, 7, 8, 9, 8, 6, 7, 0, 1, 8, 6, 3,	9, 7, 8, 9, 8, 6, 7, 0, 1, 8, 6, 3,
6, 5, 3, 3, 6, 3, 1, 1, 0, 2, 0, 7, 0,	2, 8, 2, 9, 0, 6, 4, 8, 3, 7, 8, 9,	2, 8, 2, 9, 0, 6, 4, 8, 3, 7, 8, 9,
1, 6, 2, 6, 0, 9, 6, 7, 6, 9, 0, 5, 0,	0, 4, 4, 0, 8, 0, 4, 9, 5, 8, 7, 7,	0, 4, 4, 0, 8, 0, 4, 9, 5, 8, 7, 7,
9, 3, 3, 4, 0, 6, 5, 8, 2, 5, 3, 1, 5,	4, 8, 1, 8, 3, 1, 6, 7, 4, 8, 3, 9,	4, 8, 1, 8, 3, 1, 6, 7, 4, 8, 3, 9,
7, 6, 7, 6, 6, 9, 8, 0, 7, 3, 5, 4, 7,	5, 9, 8, 8, 0, 3, 2, 1, 6, 8, 9, 3,	5, 9, 8, 8, 0, 3, 2, 1, 6, 8, 9, 3,
3, 7, 1, 3, 9, 1, 6, 3, 0, 0, 2, 0, 6,	7, 4, 1, 7, 8, 8, 8, 2, 7, 3, 0, 8,	7, 4, 1, 7, 8, 8, 8, 2, 7, 3, 0, 8,
8, 3, 0, 1, 3, 0,snip 9, 0, 1,	2, 5, 9, 7, 0, 4, 2, 7, 9, 8, 9, 5,	2, 5, 9, 7, 0, 4, 2, 7, 9, 8, 9, 5,
3, 0, 1, 0, 8, 6, 3, 5, 7, 8, 5, 3, 3,	1, 0, 8, 8, 6, 4, 9, 0, 0, 9, 4, 8,	1, 0, 8, 8, 6, 4, 9, 0, 0, 9, 4, 8,
3, 5, 1, 7, 5, 2, 9, 3, 1, 3, 9, 8, 4,	9, 8, 8, 6, 8, 2, 7, 8, 6, 5, 3, 3,	9, 8, 8, 6, 8, 2, 7, 8, 6, 5, 3, 3,
0, 2, 8, 7, 2, 0, 8, 5, 9, 3, 5, 6, 3,	6, 3, 1, 1, 0, 2, 0, 7, 0, 4, 6, 2,	6, 3, 1, 1, 0, 2, 0, 7, 0, 4, 6, 2,
0, 6, 9, 2, 5, 9, 7, 4, 4, 6, 3, 9, 0,	6, 0, 9, 6, 7, 6, 9, 0, 5, 0, 9, 3,	6, 0, 9, 6, 7, 6, 9, 0, 5, 0, 9, 3,
7, 2, 7, 1, 1, 2, 7, 0, 5, 4, 6, 3, 0,	3, 4, 0, 6, 5, 8, 2, 5, 3, 1, 5, 7,	3, 4, 0, 6, 5, 8, 2, 5, 3, 1, 5, 7,
3, 6, 9, 3, 8, 7, 1, 0, 9, 7, 9, 4, 5,	6, 7, 6, 6, 9, 8, 0, 7, 3, 5, 4, 7,	6, 7, 6, 6, 9, 8, 0, 7, 3, 5, 4, 7,
9, 4, 9, 7, 9, 1, 5, 4, 3, 3, 7, 5, 8,	8, 7, 1, 3, 9, 1, 6, 3, 0, 0, 2, 0,	8, 7, 1, 3, 9, 1, 6, 3, 0, 0, 2, 0,
9, 9, 6, 3, 1, 7, 0, 3, 1, 3, 1, 2, 2,	6, 8, 3, 0, 1, 3, 0, 5, 8, 2, 3,	6, 8, 3, 0, 1, 3, 0, 5, 8, 2, 3,
7, 5, 0, 5, 1, 1, 0, 5, 7, 6, 3, 3, 6,	snip 2, 16, 6, 6, 9, 15, 13, 8,	snip 2, 16, 6, 6, 9, 15, 13, 8,
4, 2, 1, 0, 7, 2, 3, 4, 6, 6, 4, 2, 5,	4, 2, 15, 7, 10, 5, 11, 11, 7, 10, 8,	4, 2, 15, 7, 10, 5, 11, 11, 7, 10, 8,
4, 1, 3, 4, 7, 5, 3, 8, 6, 6, 7, 3, 8,	12, 8, 4, 4, 9, 5, 11, 16, 9, 13, 16,	12, 8, 4, 4, 9, 5, 11, 16, 9, 13, 16,
2, 6, 3, 8, 0, 1, 8, 6, 3, 0, 3, 0, 4,	4, 8, 5, 12, 11, 17, 8, 9, 10, 10, 8,	4, 8, 5, 12, 11, 17, 8, 9, 10, 10, 8,
1, 0, 9, 7, 4, 0, 8, 9, 1, 2, 1, 4, 0,	5, 5, 8, 6, 10, 5, 14, 13, 10, 7, 13,	5, 5, 8, 6, 10, 5, 14, 13, 10, 7, 13,
1, 4, 7, 8, 1, 8, 4, 4, 7, 1, 0, 0, 9,	15, 2, 5, 4, 11, 3, 10, 5, 11, 9, 1,	15, 2, 5, 4, 11, 3, 10, 5, 11, 9, 1,
9, 1, 2, 6, 0, 8, 8, 9, 4, 9, 0, 1, 2,	13, 7, 6, 12, 10, 8, 8, 12, 11, 1, 9,	13, 7, 6, 12, 10, 8, 8, 12, 11, 1, 9,
5, 5, 2, 0, 1, 2, 0, 4, 6, 4, 0, 0, 9,	6, 5, 9, 17, 12, 13, 14, 3, 3, 2, 10,	6, 5, 9, 17, 12, 13, 14, 3, 3, 2, 10,
4, 6, 6, 9, 9, 9, 4, 8, 9, 3, 0, 3, 5,	13, 9, 4, 3, 3, 0, 8, 6, 11, 6, 1,	13, 9, 4, 3, 3, 0, 8, 6, 11, 6, 1,
6, 1, 4, 8, 1, 2, 5, 7, 9, 4, 1, 3, 8,	12, 9, 14, 8, 18, 13, 13, 6, 15, 16,	12, 9, 14, 8, 18, 13, 13, 6, 15, 16,
7, 9, 5, 2, 3, 9, 0, 9, 3, 7, 5, 4, 6,	11, 3, 10, 12, 11, 10, 13, 9, 7, 6,	11, 3, 10, 12, 11, 10, 13, 9, 7, 6,
0 7 0 1 7 0 0 C 4 C 2 2 2	9, 12, 16, 12, 6, 5, 9, 14, 13, 7, 2,	9, 12, 16, 12, 6, 5, 9, 14, 13, 7, 2, 12, 17, 2, 18, 7, 14, 9, 5, 10, 9,
	10 17 0 10 7 14 0 5 10 0	
4, 6, 8, 4, 7, 1, 2, 5, 2, 2, 9, 4, 5,	12, 17, 2, 18, 7, 14, 9, 5, 10, 9,	
4, 6, 8, 4, 7, 1, 2, 5, 2, 2, 9, 4, 5, 2, 5, 6, 4, 1, 5, 2, 6, 2, 8, 8, 4, 8,	12, 16, 10, 13, 14, 3, 9, 10, 14, 4,	12, 16, 10, 13, 14, 3, 9, 10, 14, 4,
4, 6, 8, 4, 7, 1, 2, 5, 2, 2, 9, 4, 5, 2, 5, 6, 4, 1, 5, 2, 6, 2, 8, 8, 4, 8, 3, 8, 9, 2, 2, 5, 7, 8, 1, 4, 8, 7, 7,	12, 16, 10, 13, 14, 3, 9, 10, 14, 4, 8, 4, 12, 11, 17, 9, 7, 2, 4, 10, 10,	12, 16, 10, 13, 14, 3, 9, 10, 14, 4, 8, 4, 12, 11, 17, 9, 7, 2, 4, 10, 10,
4, 6, 8, 4, 7, 1, 2, 5, 2, 2, 9, 4, 5, 2, 5, 6, 4, 1, 5, 2, 6, 2, 8, 8, 4, 8, 3, 8, 9, 2, 2, 5, 7, 8, 1, 4, 8, 7, 7, 4, 3, 4, 6, 2, 1, 6, 7, 7, 4, 3, 6, 1,	12, 16, 10, 13, 14, 3, 9, 10, 14, 4, 8, 4, 12, 11, 17, 9, 7, 2, 4, 10, 10, 4, 16, 5, 5, 11, 8, 7, 10, 4, 12, 2,	12, 16, 10, 13, 14, 3, 9, 10, 14, 4, 8, 4, 12, 11, 17, 9, 7, 2, 4, 10, 10, 4, 16, 5, 5, 11, 8, 7, 10, 4, 12, 2,
4, 6, 8, 4, 7, 1, 2, 5, 2, 2, 9, 4, 5, 2, 5, 6, 4, 1, 5, 2, 6, 2, 8, 8, 4, 8, 3, 8, 9, 2, 2, 5, 7, 8, 1, 4, 8, 7, 7, 4, 3, 4, 6, 2, 1, 6, 7, 7, 4, 3, 6, 1, 7, 9, 6, 0, 6, 7, 5, 7, 1, 9, 3, 2, 3,	12, 16, 10, 13, 14, 3, 9, 10, 14, 4, 8, 4, 12, 11, 17, 9, 7, 2, 4, 10, 10, 4, 16, 5, 5, 11, 8, 7, 10, 4, 12, 2, 11, 2, 12, 9, 12, 9, 8, 16, 15, 2, 4,	12, 16, 10, 13, 14, 3, 9, 10, 14, 4, 8, 4, 12, 11, 17, 9, 7, 2, 4, 10, 10, 4, 16, 5, 5, 11, 8, 7, 10, 4, 12, 2, 11, 2, 12, 9, 12, 9, 8, 16, 15, 2, 4,
8, 7, 9, 1, 7, 9, 0, 6, 4, 6, 3, 3, 3, 4, 6, 8, 4, 7, 1, 2, 5, 2, 2, 9, 4, 5, 2, 5, 6, 4, 1, 5, 2, 6, 2, 8, 8, 4, 8, 3, 8, 9, 2, 2, 5, 7, 8, 1, 4, 8, 7, 7, 4, 3, 4, 6, 2, 1, 6, 7, 7, 4, 3, 6, 1, 7, 9, 6, 0, 6, 7, 5, 7, 1, 9, 3, 2, 3, 7, 3, 5, 2, 1, 1, 3, 4, 3, 3, 6, 2, 7, 8, 6, 2, 5, 8, 1, 0, 8, 8, 6, 6, 6, 6, 3,	12, 16, 10, 13, 14, 3, 9, 10, 14, 4, 8, 4, 12, 11, 17, 9, 7, 2, 4, 10, 10, 4, 16, 5, 5, 11, 8, 7, 10, 4, 12, 2,	12, 16, 10, 13, 14, 3, 9, 10, 14, 4, 8, 4, 12, 11, 17, 9, 7, 2, 4, 10, 10, 4, 16, 5, 5, 11, 8, 7, 10, 4, 12, 2,

Test	Expected	Got
7, 6, 6, 8, 0, 8, 4, 7, 7, 2, 4, 5, 8,	7, 9, 16, 12, 8, 6, 14, 7, 11, 5, 18,	7, 9, 16, 12, 8, 6, 14, 7, 11, 5, 18,
2, 4, 4, 2, 3, 2, 4, 4, 0, 0, 1, 4, 1, 8, 2, 0, 5, 9, 6, 3, 5, 1, 6, 5, 8, 7,	11, 2, 6, 13, 8, 11, 4, 7, 10, 7, 5, 3, 12, 13, 9, 14, 8, 9, 5, 10, 12, 1,	11, 2, 6, 13, 8, 11, 4, 7, 10, 7, 5, 3, 12, 13, 9, 14, 8, 9, 5, 10, 12, 1,
0, 4, 5, 2, 1, 4, 8, 8, 7, 0, 8, 0, 3,	0, 12, 17, 13, 15, 7, 9, 13, 12, 10,	0, 12, 17, 13, 15, 7, 9, 13, 12, 10,
6, 0, 2, 6, 9, 8, 1, 8, 9, 8, 1, 8, 9,	16, 3, 10, 8, 11, 10, 2, 11, 10, 14,	16, 3, 10, 8, 11, 10, 2, 11, 10, 14,
8, 7, 5, 5, 7, 0, 2, 8, 9, 6, 5, 1, 8,	10, 12, 4, 7, 5, 3, 4, 9, 6, 9, 10,	10, 12, 4, 7, 5, 3, 4, 9, 6, 9, 10,
8, 6, 9, 1, 3, 1, 2, 7, 1, 8, 1, 4, 6, 1, 2, 9, 5, 6, 7, 4, 8, 9, 0, 2, 8, 6,	4, 1, 15, 9, 9, 13, 18, 12, 4, 5, 2, 8, 5, 16, 7, 6, 11, 6, 9, 5, 9, 12,	4, 1, 15, 9, 9, 13, 18, 12, 4, 5, 2, 8, 5, 16, 7, 6, 11, 6, 9, 5, 9, 12,
0, 4, 4, 2, 3, 4, 1, 8, 3, 5, 5, 4, 0,	15, 15, 6, 9, 6, 12, 9, 5, 2, 15, 12,	15, 15, 6, 9, 6, 12, 9, 5, 2, 15, 12,
3, 8, 7, 4, 6, 4, 4, 6, 4, 4, 8, 5, 3,	14, 7, 10, 16, 11, 6, 9, 15, 17, 8,	14, 7, 10, 16, 11, 6, 9, 15, 17, 8,
7, 2, 0, 0, 0, 3, 1, 3, 9, 9, 4, 1, 2, 8, 4, 9, 5, 6, 6, 3, 3, 0, 5, 4, 9, 9,	13, 8, 7, 3, 4, 15, 14, 13, 6, 6, 11, 15, 10, 13, 1, 12, 10, 6, 11, 7, 10,	13, 8, 7, 3, 4, 15, 14, 13, 6, 6, 11, 15, 10, 13, 1, 12, 10, 6, 11, 7, 10,
2, 5, 3, 5, 7, 5, 3, 3, 7, 1, 2, 3, 9,	7, 8, 14, 9, 9, 18, 7, 14, 14, 10,	7, 8, 14, 9, 9, 18, 7, 14, 14, 10,
8, 3, 5, 2, 3, 7, 8, 6, 8, 9, 3, 8, 5,	12, 12, 6, 3, 8, 15, 2, 6, 7, 2, 12,	12, 12, 6, 3, 8, 15, 2, 6, 7, 2, 12,
5, 9, 0, 0, 0, 4, 6, 2, 7, 4, 1, 1, 8,	10, 2, 13, 9, 6, 11, 8, 0, 12, 9, 16,	10, 2, 13, 9, 6, 11, 8, 0, 12, 9, 16,
4, 1, 7, 9, 8, 7, 9, 7, 5, 6, 8, 7, 3, 6, 6, 2, 9, 9, 1, 9, 9, 4, 3, 8, 9,	6, 9, 9, 10, 15, 7, 8, 15, 8, 6, 11, 2, 1, 7, 0, 8, 4, 4, 17, 18, 8, 3, 4,	6, 9, 9, 10, 15, 7, 8, 15, 8, 6, 11, 2, 1, 7, 0, 8, 4, 4, 17, 18, 8, 3, 4,
0, 9, 3, 9, 3, 2, 8, 8, 8, 7, 9, 3, 2,	12, 4, 18, 13, 13, 8, 8, 10, 1, 5, 5,	12, 4, 18, 13, 13, 8, 8, 10, 1, 5, 5,
2, 1, 4, 6, 3, 8, 0, 9, 7, 6, 7, 6, 6,	15, 18, 2, 11, 10, 5, 9, 7, 7, 4, 15,	15, 18, 2, 11, 10, 5, 9, 7, 7, 4, 15,
7, 2, 1, 5, 5, 6, 9, 8, 9, 9, 2, 2, 2, 5, 1, 9, 3, 9, 4, 8, 7, 7, 6, 8, 3, 2,	3, 7, 8, 13, 9, 10, 8, 9, 9, 7, 17, 7, 10, 10, 6, 8, 12, 14, 15, 1, 4, 1,	3, 7, 8, 13, 9, 10, 8, 9, 9, 7, 17, 7, 10, 10, 6, 8, 12, 14, 15, 1, 4, 1,
5, 9, 7, 6, 4, 7, 1, 3, 1, 6, 7, 9, 5,	12, 12, 10, 16, 5, 4, 7, 8, 13, 9,	12, 12, 10, 16, 5, 4, 7, 8, 13, 9,
5, 8, 6, 8, 8, 5, 4, 7, 9, 1, 1, 2, 1,	10, 17, 8, 7, 15, 7, 8, 7, 14, 16, 3,	10, 17, 8, 7, 15, 7, 8, 7, 14, 16, 3,
8, 4, 1, 1, 9, 9, 0, 9, 1, 0, 5, 2, 8, 6, 2, 3, 2, 1, 2, 2, 7, 4, 5, 5, 1, 1,	12, 7, 3, 10, 13, 2, 12, 12, 11, 5, 4, 9, 13, 1, 9, 3, 17, 12, 2, 15, 16,	12, 7, 3, 10, 13, 2, 12, 12, 11, 5, 4, 9, 13, 1, 9, 3, 17, 12, 2, 15, 16,
2, 8, 2, 7, 8, 4, 7, 1, 1, 9, 2, 7, 9,	14, 13, 11, 11, 6, 3, 6, 11, 13, 12,	14, 13, 11, 11, 6, 3, 6, 11, 13, 12,
8, 1, 7, 2, 0, 9, 5, 1, 5, 5, 6, 7, 8,	10, 9, 14, 13, 7, 10, 11, 14, 9, 11,	10, 9, 14, 13, 7, 10, 11, 14, 9, 11,
1, 9, 4, 8, 2, 2, 6, 5, 0, 6, 8, 9, 2, 2, 0, 5, 3, 8, 5, 7, 3, 5, 4, 7, 8, 8,	2, 11, 7, 14, 10, 16, 14, 15, 5, 4, 5, 14, 8, 10, 10, 12, 13, 8, 9, 11,	2, 11, 7, 14, 10, 16, 14, 15, 5, 4, 5, 14, 8, 10, 10, 12, 13, 8, 9, 11,
7, 7, 5, 6, 4, 8, 6, 9, 7, 4, 9, 7, 7,	9, 10, 3, 9, 6, 13, 16, 12, 7, 7, 9,	9, 10, 3, 9, 6, 13, 16, 12, 7, 7, 9,
5, 3, 4, 2, 3, 0, 9, 4, 5, 5, 8, 9, 5,	12, 4, 11, 15, 13, 11, 12, 8, 6, 14,	12, 4, 11, 15, 13, 11, 12, 8, 6, 14,
9, 0, 5, 4, 7, 4, 2, 4, 8, 4, 9, 5, 5, 0, 8, 4, 1, 6, 5, 3, 4, 8, 7, 3, 8, 4,	14, 7, 13, 9, 13, 3, 5, 9, 4, 13, 6, 7, 10, 14, 15, 5, 10, 3, 7, 10, 8,	14, 7, 13, 9, 13, 3, 5, 9, 4, 13, 6, 7, 10, 14, 15, 5, 10, 3, 7, 10, 8,
2, 2, 8, 3, 4, 0, 8, 8, 5, 5, 4, 1, 2,	16, 12, 4, 7, 10, 2, 6, 6, 8, 5, 10,	16, 12, 4, 7, 10, 2, 6, 6, 8, 5, 10,
4, 8, 6, 3, 4, 3, 6, 0, 5, 3, 9, 9, 9,	10, 2, 2, 2, 9, 2, 14, 15, 11, 7, 5,	10, 2, 2, 2, 9, 2, 14, 15, 11, 7, 5,
2, 1, 6, 2, 6, 8, 2, 4, 5, 6, 6, 9, 7, 7, 0, 5, 1, 6, 6, 6, 3, 5, 5, 8, 2, 7,	8, 12, 3, 12, 10, 11, 10, 9, 6, 4, 13, 9, 6, 5, 10, 10, 12, 17, 1, 15,	8, 12, 3, 12, 10, 11, 10, 9, 6, 4, 13, 9, 6, 5, 10, 10, 12, 17, 1, 15,
7, 6, 9, 1, 2, 8, 7, 5, 5, 1, 0, 3, 8,	5, 9, 2, 6, 13, 13, 2, 7, 12, 16, 7,	5, 9, 2, 6, 13, 13, 2, 7, 12, 16, 7,
7, 7, 2, 5, 1, 2, 6, 8, 7, 0, 6, 8, 4,	10, 2, 9, 8, 8, 6, 8, 8, 13, 5, 7,	10, 2, 9, 8, 8, 6, 8, 8, 13, 5, 7,
8, 1, 7, 6, 7, 0, 1, 8, 2, 8, 2, 0, 4, 0, 6, 3, 3, 2, 1, 2, 4, 7, 9, 1, 8, 5,	13, 5, 15, 14, 8, 9, 12, 12, 8, 8, 3,	11, 17, 14, 8, 6, 7, 10, 9, 8, 13, 13, 5, 15, 14, 8, 9, 12, 12, 8, 8, 3,
4, 9, 5, 0, 4, 1, 1, 7, 7, 2, 9, 7, 9,	11, 11, 8, 9, 14, 17, 10, 11, 9, 7,	11, 11, 8, 9, 14, 17, 10, 11, 9, 7,
5, 9, 4, 9, 7, 6, 2, 1, 1, 6, 3, 7, 2,	13, 14, 5, 9, 12, 12, 8, 15, 5, 7, 0,	13, 14, 5, 9, 12, 12, 8, 15, 5, 7, 0,
2, 4, 7, 2, 2, 5, 3, 8, 6, 3, 8, 7, 4, 1, 8, 3, 0, 6, 3, 0, 0, 7, 4, 6, 5, 1,	14, 13, 7, 15, 6, 6, 9, 11, 10, 11, 12, 11, 4, 4, 12, 9, 7, 7, 8, 14, 12,	14, 13, 7, 15, 6, 6, 9, 11, 10, 11, 12, 11, 4, 4, 12, 9, 7, 7, 8, 14, 12,
7, 4, 0, 1, 7, 9, 6, 7, 8, 7, 7, 5, 7,	12, 5, 2, 10, 7, 14, 8, 8, 11, 12,	12, 5, 2, 10, 7, 14, 8, 8, 11, 12,
8, 9, 3, 9, 1, 8, 7, 2, 8, 0, 5, 6, 7,	10, 5, 11, 11, 11, 11, 9, 10, 3, 15,	10, 5, 11, 11, 11, 11, 9, 10, 3, 15,
9, 7, 3, 8, 2, 0, 0, 2, 0, 4, 8, 5, 9, 2, 6, 3, 7, 1, 0, 8, 7, 1, 8, 2, 0, 9,	6, 14, 8, 6, 5, 8, 9, 7, 10, 8, 9, 1, 10, 1, 6, 6, 14, 12, 6, 10, 8, 5, 14,	6, 14, 8, 6, 5, 8, 9, 7, 10, 8, 9, 1, 10, 1, 6, 6, 14, 12, 6, 10, 8, 5, 14,
9, 6, 6, 4, 8, 0, 9, 6, 0, 7, 4, 1, 6,		9, 6, 13, 6, 10, 13, 16, 11, 10, 2,
2, 2, 7, 3, 7, 4, 1, 5, 8, 6, 1, 6, 2,	3, 4, 16, 7, 11, 4, 11, 4, 11, 6, 16,	3, 4, 16, 7, 11, 4, 11, 4, 11, 6, 16,
1, 6, 7, 0, 8, 3, 0, 2, 9, 5, 3, 6, 1, 8, 4, 3, 7, 7, 2, 3, 8, 4, 6, 7, 6, 0,	11, 1, 15, 11, 11, 17, 3, 10, 14, 11, 6, 9, 11, 5, 16, 5, 3, 13, 4, 6, 12,	11, 1, 15, 11, 11, 17, 3, 10, 14, 11, 6, 9, 11, 5, 16, 5, 3, 13, 4, 6, 12,
0, 5, 7, 4, 0, 3, 0, 2, 0, 0, 4, 8, 9,	5, 4, 1, 5, 10, 7, 18, 2, 8, 12, 8,	5, 4, 1, 5, 10, 7, 18, 2, 8, 12, 8,
3, 6, 2, 2, 2, 2, 3, 3, 1, 1, 4, 5, 0,	13, 13, 4, 5, 9, 7, 15, 8, 11, 12, 9,	13, 13, 4, 5, 9, 7, 15, 8, 11, 12, 9,
1, 6, 9, 0, 3, 3, 1, 2, 1, 5, 9, 2, 2, 4, 5, 8, 3, 1, 8, 6, 4, 7, 7, 2, 0, 2,	14, 12, 9, 8, 17, 15, 10, 4, 3, 1, 15, 7, 11, 11, 4, 5, 13, 3, 6, 9, 9,	14, 12, 9, 8, 17, 15, 10, 4, 3, 1, 15, 7, 11, 11, 4, 5, 13, 3, 6, 9, 9,
3, 5, 9, 3, 9, 8, 6, 3, 4, 6, 7, 8, 8,	8, 11, 9, 11, 15, 4, 7, 17, 7, 5, 6,	8, 11, 9, 11, 15, 4, 7, 17, 7, 5, 6,
9, 3, 4, 5, 2, 2, 4, 7, 9, 3, 4, 0, 0,	10, 9, 6, 8, 7, 6, 8, 5, 16, 12, 3,	10, 9, 6, 8, 7, 6, 8, 5, 16, 12, 3,
1, 0, 2, 6, 9, 7, 3, 8, 8, 8, 0, 4, 2, 4, 1, 9, 3, 8, 3, 5, 1, 8, 6, 6, 8, 6,	10, 13, 15, 10, 9, 9, 15, 10, 5, 7, 13, 9, 11, 12, 5, 15, 8, 2, 17, 3, 6,	10, 13, 15, 10, 9, 9, 15, 10, 5, 7, 13, 9, 11, 12, 5, 15, 8, 2, 17, 3, 6,
0, 7, 2, 8, 9, 4, 3, 4, 2, 3, 3, 1, 8,	6, 8, 16, 13, 11, 9, 11, 3, 3, 2, 5,	6, 8, 16, 13, 11, 9, 11, 3, 3, 2, 5,
4, 9, 5, 6, 1, 9, 7, 8, 5, 8, 1, 7, 9,	8, 9, 12, 11, 7, 13, 10, 10, 2, 0,	8, 9, 12, 11, 7, 13, 10, 10, 2, 0,
8, 5, 8, 2, 9, 2, 4, 7, 4, 9, 7, 4, 7, 3, 6, 9, 9, 3, 0, 5, 1, 3, 3, 0, 5, 0,	16, 10, 8, 17, 4, 0, 11, 11, 11, 15, 8, 12, 4, 16, 12, 2, 14, 8, 4, 7, 2,	16, 10, 8, 17, 4, 0, 11, 11, 11, 15, 8, 12, 4, 16, 12, 2, 14, 8, 4, 7, 2,
_, _, _, _, _, _, _, _, _, _, ,, _, ,, ,	-, -, -,, -, -, -, 0	

Test	Expected	Got	
1, 6, 2, 1, 3, 3, 6, 5, 4, 7, 2, 9, 4,	2, 14, 4, 10, 8, 3, 9, 16, 15, 7, 15,	2, 14, 4, 10, 8, 3, 9, 16, 15, 7, 15,	
0, 4, 1, 7, 7, 8, 5, 1, 9, 4, 5, 7, 2,	6, 7, 14, 14, 9, 14, 11, 9, 4, 16,	6, 7, 14, 14, 9, 14, 11, 9, 4, 16,	
8, 8, 3, 5, 4, 5, 4, 9, 8, 0, 5, 3, 2,	13, 7, 13, 9, 16, 11, 10, 12, 12, 10,	13, 7, 13, 9, 16, 11, 10, 12, 12, 10,	
6, 4, 3, 5, 3, 3, 5, 3, 2, 4, 0, 0, 4,	11, 8, 8, 12, 9, 6, 4, 0, 5, 15, 11,	11, 8, 8, 12, 9, 6, 4, 0, 5, 15, 11,	
2, 0, 7, 1, 1, 6, 0, 1, 4, 5, 6, 4, 7,	8, 10, 8, 8, 1, 5, 6, 15, 13, 7, 11,	8, 10, 8, 8, 1, 5, 6, 15, 13, 7, 11,	
3, 9, 6, 3};	8, 9, 8, 4, 8, 6, 5, 4, 4, 14, 2, 10,	8, 9, 8, 4, 8, 6, 5, 4, 4, 14, 2, 10,	
LLNode* head =	11, 16, 6, 5, 9, 9, 7, 10, 5, 14, 8,	11, 16, 6, 5, 9, 9, 7, 10, 5, 14, 8,	
LLNode::createWithIterators(arr, arr +	6, 6, 9, 8, 9, 9, 13, 9, 13, 7, 14,	6, 6, 9, 8, 9, 9, 13, 9, 13, 7, 14,	
<pre>sizeof(arr) / sizeof(int));</pre>	11, 1, 7, 4, 7, 9, 10, 18, 14, 13, 3,	11, 1, 7, 4, 7, 9, 10, 18, 14, 13, 3,	
LLNode::printList(head);	13, 11, 11, 9, 16, 16, 11, 4, 11, 7,	13, 11, 11, 9, 16, 16, 11, 4, 11, 7,	
cout << "\n";	9, 4, 12, 13, 8, 8, 9, 7, 6, 1, 8,	9, 4, 12, 13, 8, 8, 9, 7, 6, 1, 8,	
LLNode* newhead =	12, 16, 14, 6, 8, 10, 17, 7, 4, 10,	12, 16, 14, 6, 8, 10, 17, 7, 4, 10,	
<pre>foldLinkedList(head);</pre>	10, 3, 16, 9, 12, 3, 13, 8, 16, 7,	10, 3, 16, 9, 12, 3, 13, 8, 16, 7,	
LLNode::printList(newhead);	12, 9, 15, 3, 12, 5, 10, 17, 7, 7, 6,	12, 9, 15, 3, 12, 5, 10, 17, 7, 7, 6,	
	9, 8, 11, 7, 8, 6, 15, 14, 12, 1, 9,	9, 8, 11, 7, 8, 6, 15, 14, 12, 1, 9,	
	13, 12, 8, 12, 10, 16, 15, 15, 13, 8,	13, 12, 8, 12, 10, 16, 15, 15, 13, 8,	
	11, 14, 2, 12, 12, 4, 10, 9, 12, 16,	11, 14, 2, 12, 12, 4, 10, 9, 12, 16,	
	5, 14, 11, 9, 4, 4, 7, 6, 9, 8, 2,	5, 14, 11, 9, 4, 4, 7, 6, 9, 8, 2,	
	10, 1, 3, 11, 10, 6, 6, 3, 9, 13, 10,	10, 1, 3, 11, 10, 6, 6, 3, 9, 13, 10,	
	15, 9, 11, 12, 2, 12, 7, 7, 11, 13,	15, 9, 11, 12, 2, 12, 7, 7, 11, 13,	
	13, 10, 14, 11, 10, 14, 8, 10, 15, 4,	13, 10, 14, 11, 10, 14, 8, 10, 15, 4,	
	9, 7, 12, 10, 15, 8, 7, 10, 9, 6, 15,	9, 7, 12, 10, 15, 8, 7, 10, 9, 6, 15,	
	6, 6, 7, 9, 9, 8, 5, 6, 4, 4, 2, 6,	6, 6, 7, 9, 9, 8, 5, 6, 4, 4, 2, 6,	
	11, 5, 14, 6, 5, 14, 2, 9, 4, 8, 10,	11, 5, 14, 6, 5, 14, 2, 9, 4, 8, 10,	
	13, 11, 5, 17, 6, 12]	13, 11, 5, 17, 6, 12]	

int arr[] = {6, 5, 8, 2, 3, 1, 3, 7, [6, 5, 8, 2, 3, 1, 3, 7, 7, 9, 0, 4, [6, 5, 8, 2, 3, 1, 3, 7, 7, 9, 0, 4, 7, 9, 0, 4, 4, 8, 4, 2, 1, 9, 4, 3, 3, 4, 8, 4, 2, 1, 9, 4, 3, 3, 6, 4, 4, 4, 8, 4, 2, 1, 9, 4, 3, 3, 6, 4, 4, 6, 4, 4, 2, 5, 3, 7, 1, 7, 7, 1, 4, 7, 2, 5, 3, 7, 1, 7, 7, 1, 4, 7, 7, 7, 2, 5, 3, 7, 1, 7, 7, 1, 4, 7, 7, 7, 7, 7, 7, 0, 0, 8, 2, 9, 4, 9, 4, 9, 9, 7, 0, 0, 8, 2, 9, 4, 9, 4, 9, 9, 6, 7, 0, 0, 8, 2, 9, 4, 9, 4, 9, 9, 6, 6, 3, 0, 5, 3, 3, 9, 2, 3, 2, 4, 8, 9, 3, 0, 5, 3, 3, 9, 2, 3, 2, 4, 8, 9, 3, 0, 5, 3, 3, 9, 2, 3, 2, 4, 8, 9, 3, 1, 9, 2, 8, 3, 4, 7, 8, 5, 4, 3, 1, 3, 1, 9, 2, 8, 3, 4, 7, 8, 5, 4, 3, 3, 1, 9, 2, 8, 3, 4, 7, 8, 5, 4, 3, 8, 8, 7, 3, 1, 7, 1, 9, 2, 8, 5, 5, 3, 1, 8, 8, 7, 3, 1, 7, 1, 9, 2, 8, 5, 1, 8, 8, 7, 3, 1, 7, 1, 9, 2, 8, 5, 7, 1, 6, 6, 4, 2, 0, 6, 5, 1, 2, 3, 5, 5, 3, 7, 1, 6, 6, 4, 2, 0, 6, 5, 1, 5, 3, 7, 1, 6, 6, 4, 2, 0, 6, 5, 1, 7, 1, 9, 1, 4, 8, 6, 1, 9, 2, 8, 9, 8, 2, 3, 5, 7, 1, 9, 1, 4, 8, 6, 1, 9, 2, 3, 5, 7, 1, 9, 1, 4, 8, 6, 1, 9, 8, 7, 6, 0, 3, 9, 9, 7, 1, 8, 3, 4, 9, 2, 8, 9, 8, 8, 7, 6, 0, 3, 9, 9, 7, 2, 8, 9, 8, 8, 7, 6, 0, 3, 9, 9, 7, 8, 4, 1, 8, 4, 3, 8, 9, 0, 1, 1, 4, 6, 1, 8, 3, 4, 9, 8, 4, 1, 8, 4, 3, 8, 1, 8, 3, 4, 9, 8, 4, 1, 8, 4, 3, 8, 4, 7, 1, 9, 1, 5, 4, 5, 9, 0, 2, 8, 5, 9, 0, 1, 1, 4, 6, 4, 7, 1, 9, 1, 5, 9, 0, 1, 1, 4, 6, 4, 7, 1, 9, 1, 5, 4, 1, 6, 3, 3, 7, 8, 6, 5, 0, 3, 7, 7, 4, 5, 9, 0, 2, 8, 5, 4, 1, 6, 3, 3, 4, 5, 9, 0, 2, 8, 5, 4, 1, 6, 3, 3, 3, 9, 6, 4, 3, 2, 7, 9, 9, 0, 9, 2, 2, 7, 8, 6, 5, 0, 3, 7, 7, 3, 9, 6, 4, 7, 8, 6, 5, 0, 3, 7, 7, 3, 9, 6, 4, 5, 1, 6, 7, 4, 2, 0, 3, 7, 8, 8, 1, 6, 3, 2, 7, 9, 9, 0, 9, 2, 2, 5, 1, 6, 3, 2, 7, 9, 9, 0, 9, 2, 2, 5, 1, 6, 8, 0, 2, 2, 3, 2, 7, 9, 1, 2, 8, 5, 4, 7, 4, 2, 0, 3, 7, 8, 8, 1, 6, 8, 0, 7, 4, 2, 0, 3, 7, 8, 8, 1, 6, 8, 0, 8, 7, 1, 3, 1, 5, 8, 6, 8, 3, 4, 6, 9, 2, 2, 3, 2, 7, 9, 1, 2, 8, 5, 4, 8, 2, 2, 3, 2, 7, 9, 1, 2, 8, 5, 4, 8, 9, 9, 2, 7, 1, 1, 2, 1, 9, 6, 7, 3, 2, 7, 1, 3, 1, 5, 8, 6, 8, 3, 4, 6, 9, 7, 1, 3, 1, 5, 8, 6, 8, 3, 4, 6, 9, 4, 7, 0, 4, 4, 9, 8, 4, 6, 1, 7, 2, 0, 9, 9, 2, 7, 1, 1, 2, 1, 9, 6, 7, 3, 9, 9, 2, 7, 1, 1, 2, 1, 9, 6, 7, 3, 8, 0, 1, 9, 8, 8, 6, 5, 7, 0, 4, 8, 4, 2, 4, 7, 0, 4, 4, 9, 8, 4, 6, 1, 7, 2, 4, 7, 0, 4, 4, 9, 8, 4, 6, 1, 7, 2, 0, 8, 0, 1, 9, 8, 8, 6, 5, 7, 0, 2, 0, 8, 0, 1, 9, 8, 8, 6, 5, 7, 0, 9, 0, 2, 4, 0, 3, 6, 4, 6, 5, 3, 6, 6, 1, 6, 7, 3, 0, 2, 7, 1, 4, 9, 0, 5, 4, 4, 8, 4, 9, 0, 2, 4, 0, 3, 6, 4, 6, 4, 8, 4, 9, 0, 2, 4, 0, 3, 6, 4, 6, 0, 3, 6, 0, 9, 6, 3, 9, 4, 3, 9, 3, 6, 5, 3, 6, 6, 1, 6, 7, 3, 0, 2, 7, 1, 5, 3, 6, 6, 1, 6, 7, 3, 0, 2, 7, 1, 7, 6, 2, 9, 7, 7, 9, 5, 1, 1, 6, 1, 3, 4, 9, 0, 5, 4, 0, 3, 6, 0, 9, 6, 3, 4, 9, 0, 5, 4, 0, 3, 6, 0, 9, 6, 3, 7, 9, 0, 1, 4, 4, 4, 6, 6, 8, 5, 7, 1, 9, 4, 3, 9, 3, 6, 7, 6, 2, 9, 7, 7, 9, 4, 3, 9, 3, 6, 7, 6, 2, 9, 7, 7, 1, 5, 4, 6, 7, 8, 6, 8, 5, 0, 6, 4, 1, 9, 5, 1, 1, 6, 1, 3, 7, 9, 0, 1, 4, 9, 5, 1, 1, 6, 1, 3, 7, 9, 0, 1, 4, 2, 1, 3, 1, 5, 5, 5, 2, 3, 7, 7, 9, 6, 4, 4, 6, 6, 8, 5, 7, 1, 1, 5, 4, 6, 4, 4, 6, 6, 8, 5, 7, 1, 1, 5, 4, 6, 9, 0, 4, 8, 1, 3, 2, 0, 0, 7, 6, 6, 1, 7, 8, 6, 8, 5, 0, 6, 4, 1, 2, 1, 3, 7, 8, 6, 8, 5, 0, 6, 4, 1, 2, 1, 3, 7, 7, 3, 0, 9, 2, 8, 9, 5, 4, 7, 7, 3, 1, 5, 5, 5, 2, 3, 7, 7, 9, 6, 9, 0, 1, 5, 5, 5, 2, 3, 7, 7, 9, 6, 9, 0, 6, 9, 1, 5, 6, 8, 2, 6, 5, 3, 1, 0, 4, 4, 8, 1, 3, 2, 0, 0, 7, 6, 6, 1, 7, 4, 8, 1, 3, 2, 0, 0, 7, 6, 6, 1, 7, 3, 1, 3, 9, 4, 8, 5, 4, 7, 3, 5, 4, 2, 7, 3, 0, 9, 2, 8, 9, 5, 4, 7, 7, 3, 7, 3, 0, 9, 2, 8, 9, 5, 4, 7, 7, 3, 0, 2, 0, 9, 0, 3, 2, 9, 8, 3, 4, 1, 6, 6, 9, 1, 5, 6, 8, 2, 6, 5, 3, 1, 0, 6, 9, 1, 5, 6, 8, 2, 6, 5, 3, 1, 0, 8, 4, 5, 8, 0, 0, 2, 5, 5, 7, 5, 5, 6, 4, 3, 1, 3, 9, 4, 8, 5, 4, 7, 3, 5, 4, 3, 1, 3, 9, 4, 8, 5, 4, 7, 3, 5, 7, 4, 7, 5, 0, 6, 4, 8, 9, 2, 3, 8, 5, 4, 2, 0, 2, 0, 9, 0, 3, 2, 9, 8, 3, 4, 2, 0, 2, 0, 9, 0, 3, 2, 9, 8, 3, 2, 2, 5, 3, 2, 0, 4, 8, 6, 2, 5, 9, 6, 4, 1, 6, 8, 4, 5, 8, 0, 0, 2, 5, 5, 4, 1, 6, 8, 4, 5, 8, 0, 0, 2, 5, 5, 8, 5, 1, 1, 2, 9, 1, 1, 2, 3, 0, 4, 8, 7, 5, 5, 6, 7, 4, 7, 5, 0, 6, 4, 8, 7, 5, 5, 6, 7, 4, 7, 5, 0, 6, 4, 8, 9, 2, 3, 8, 5, 2, 2, 5, 3, 2, 0, 4, 1, 4, 3, 0, 0, 2, 6, 8, 9, 8, 1, 6, 1, 9, 2, 3, 8, 5, 2, 2, 5, 3, 2, 0, 4, 8, 7, 8, 6, 3, 4, 6, 3, 5, 5, 6, 5, 1, 8, 6, 2, 5, 9, 6, 8, 5, 1, 1, 2, 9, 8, 6, 2, 5, 9, 6, 8, 5, 1, 1, 2, 9, 7, 0, 5, 6, 0, 5, 6, 0, 6, 3, 7, 8, 3, 1, 1, 2, 3, 0, 4, 8, 1, 4, 3, 0, 0, 1, 1, 2, 3, 0, 4, 8, 1, 4, 3, 0, 0, 2, 9, 6, 7, 4, 2, 0, 5, 5, 1, 1, 1, 9, 2, 6, 8, 9, 8, 1, 6, 1, 8, 7, 8, 6, 2, 6, 8, 9, 8, 1, 6, 1, 8, 7, 8, 6,

Test	Expected	Got
4, 0, 4, 3, 2, 6, 2, 3, 2, 5, 8, 6, 4,	3, 4, 6, 3, 5, 5, 6, 5, 1, 7, 0, 5,	3, 4, 6, 3, 5, 5, 6, 5, 1, 7, 0, 5,
4, 6, 9, 0, 6, 2, 9, 8, 8, 3, 3, 9, 9,	6, 0, 5, 6, 0, 6, 3, 7, 8, 3, 2, 9,	6, 0, 5, 6, 0, 6, 3, 7, 8, 3, 2, 9,
6, 8, 5, 1, 6, 7, 6, 9, 5, 4, 8, 0, 1,	6, 7, 4, 2, 0, 5, 5, 1, 1, 1, 9, 4,	6, 7, 4, 2, 0, 5, 5, 1, 1, 1, 9, 4
7, 2, 8, 6, 6, 1, 7, 6, 1, 7, 2, 6, 7,	0, 4, 3, 2, 6, 2, 3, 2, 5, 8, 6, 4,	0, 4, 3, 2, 6, 2, 3, 2, 5, 8, 6, 4
7, 5, 3, 2, 6, 2, 5, 4, 8, 3, 7, 6, 5,	4, 6, 9, 0, 6, 2, 9, 8, 8, 3, 3, 9,	4, 6, 9, 0, 6, 2, 9, 8, 8, 3, 3, 9,
1, 4, 4, 4, 6, 1, 9, 6, 1, 2, 7, 9, 9,	9, 6, 8, 5, 1, 6, 7, 6, 9, 5, 4, 8,	
		9, 6, 8, 5, 1, 6, 7, 6, 9, 5, 4, 8,
0, 3, 0, 7, 9, 0, 0, 4, 0, 7, 0, 4, 1,	0, 1, 7, 2, 8, 6, 6, 1, 7, 6, 1, 7,	0, 1, 7, 2, 8, 6, 6, 1, 7, 6, 1, 7,
7, 0, 0, 8, 7, 0, 5, 1, 3, 0, 4, 0, 5,	2, 6, 7, 7, 5, 3, 2, 6, 2, 5, 4, 8,	2, 6, 7, 7, 5, 3, 2, 6, 2, 5, 4, 8,
6, 3, 2, 4, 2, 5, 8, 8, 8, 9, 6, 6, 1,		3, 7, 6, 5, 1, 4, 4, 4, 6, 1, 9, 6,
8, 0, 1, 3, 8, 6, 6, 8, 0, 4, 6, 9, 8,	1, 2, 7, 9, 9, 0, 3, 0, 7, 9, 0, 0,	1, 2, 7, 9, 9, 0, 3, 0, 7, 9, 0, 0,
0, 7, 6, 7, 5, 8, 0, 4, 8, 7, 4, 1, 3,	4, 0, 7, 0, 4, 1, 7, 0, 0, 8, 7, 0,	4, 0, 7, 0, 4, 1, 7, 0, 0, 8, 7, 0,
6, 1, 3, 8, 7, 6, 2, 2, 6, 9, 5, 7, 7,	5, 1, 3, 0, 4, 0, 5, 6, 3, 2, 4, 2,	5, 1, 3, 0, 4, 0, 5, 6, 3, 2, 4, 2,
4, 7, 4, 0, 0, 1, 1, 0, 4, 9, 4, 9, 9,	5, 8, 8, 8, 9, 6, 6, 1, 8, 0, 1, 3,	5, 8, 8, 8, 9, 6, 6, 1, 8, 0, 1, 3,
5, 3, 9, 7, 0, 8, 9, 0, 5, 9, 3, 2, 1,	8, 6, 6, 8, 0, 4, 6, 9, 8, 0, 7, 6,	8, 6, 6, 8, 0, 4, 6, 9, 8, 0, 7, 6,
5, 4, 9, 8, 7, 4, 4, 5, 8, 0, 2, 8, 8,	7, 5, 8, 0, 4, 8, 7, 4, 1, 3, 6, 1,	7, 5, 8, 0, 4, 8, 7, 4, 1, 3, 6, 1,
4, 3, 5, 4, 0, 7, 4, 4, 4, 1, 0, 6, 3,	3, 8, 7, 6, 2, 2, 6, 9, 5, 7, 7, 4,	3, 8, 7, 6, 2, 2, 6, 9, 5, 7, 7, 4,
1, 8, 8, 4, 3, 9, 7, 1, 1, 8, 0, 3, 9,	7, 4, 0, 0, 1, 1, 0, 4, 9, 4, 9, 9,	7, 4, 0, 0, 1, 1, 0, 4, 9, 4, 9, 9,
5, 3, 2, 3, 6, 0, 8, 4, 8, 8, 5, 2, 8,	5, 3, 9, 7, 0, 8, 9, 0, 5, 9, 3, 2,	5, 3, 9, 7, 0, 8, 9, 0, 5, 9, 3, 2,
0, 5, 6, 4, 0, 6, 8, 3, 3, 5, 7, 3, 5,	1, 5, 4, 9, 8, 7, 4, 4, 5, 8, 0, 2,	1, 5, 4, 9, 8, 7, 4, 4, 5, 8, 0, 2,
7, 5, 2, 6, 4, 1, 1, 2, 4, 2, 8, 0, 0,		8, 8, 4, 3, 5, 4, 0, 7, 4, 4, 4, 1,
9, 4, 6, 1, 0, 8, 1, 3, 2, 5, 8, 0, 0,	0, 6, 3, 1, 8, 8, 4, 3, 9, 7, 1, 1,	0, 6, 3, 1, 8, 8, 4, 3, 9, 7, 1, 1,
4, 1, 8, 9, 8, 0, 4, 8, 6, 6, 3, 0, 4,	8, 0, 3, 9, 5, 3, 2, 3, 6, 0, 8, 4,	8, 0, 3, 9, 5, 3, 2, 3, 6, 0, 8, 4,
7, 5, 3, 7, 5, 6, 0, 8, 1, 3, 8, 3, 5,	8, 8, 5, 2, 8, 0, 5, 6, 4, 0, 6, 8,	8, 8, 5, 2, 8, 0, 5, 6, 4, 0, 6, 8,
0, 1, 2, 4, 9, 5, 0, 1, 1, 8, 3, 0, 9,	3, 3, 5, 7, 3, 5, 7, 5, 2, 6, 4, 1,	3, 3, 5, 7, 3, 5, 7, 5, 2, 6, 4, 1,
6, 9, 1, 6, 5, 4, 9, 1, 0, 8, 5, 8, 1,	1, 2, 4, 2, 8, 0, 0, 9, 4, 6, 1, 0,	1, 2, 4, 2, 8, 0, 0, 9, 4, 6, 1, 0,
8, 4, 5, 3, 6, 7, 9, 9, 4, 9, 2, 6, 9,	8, 1, 3, 2, 5, 8, 0, 0, 4, 1, 8, 9,	8, 1, 3, 2, 5, 8, 0, 0, 4, 1, 8, 9,
5, 0, 8, 3, 7, 2, 2, 6, 0, 5, 8, 8, 7,	8, 0, 4, 8, 6, 6, 3, 0, 4, 7, 5, 3,	8, 0, 4, 8, 6, 6, 3, 0, 4, 7, 5, 3,
7, 6, 2, 0, 4, 1, 9, 5, 4, 5, 3, 8, 0,	7, 5, 6, 0, 8, 1, 3, 8, 3, 5, 0, 1,	7, 5, 6, 0, 8, 1, 3, 8, 3, 5, 0, 1,
4, 3, 4, 3, 7, 4, 2, 5, 1, 1, 7, 0, 0,	2, 4, 9, 5, 0, 1, 1, 8, 3, 0, 9, 6,	2, 4, 9, 5, 0, 1, 1, 8, 3, 0, 9, 6,
6, 3, 3, 0, 5, 3, 5, 3, 8, 9, 0, 6, 7,	9, 1, 6, 5, 4, 9, 1, 0, 8, 5, 8, 1,	9, 1, 6, 5, 4, 9, 1, 0, 8, 5, 8, 1,
2, 2, 0, 3, 4, 0, 3, 0, 1, 3, 2, 9, 1,	8, 4, 5, 3, 6, 7, 9, 9, 4, 9, 2, 6,	8, 4, 5, 3, 6, 7, 9, 9, 4, 9, 2, 6,
6, 3, 4, 2, 4, 0, 0, 8, 6, 5, 4, 3, 2,	9, 5, 0, 8, 3, 7, 2, 2, 6, 0, 5, 8,	9, 5, 0, 8, 3, 7, 2, 2, 6, 0, 5, 8,
9, 9, 7, 4, 6, 1, 2, 5, 0, 6, 6, 5, 1,	8, 7, 7, 6, 2, 0, 4, 1, 9, 5, 4, 5,	8, 7, 7, 6, 2, 0, 4, 1, 9, 5, 4, 5,
1, 1, 3, 2, 3, 2, 5, 2, 1, 4, 2, 5, 7,	3, 8, 0, 4, 3, 4, 3, 7, 4, 2, 5, 1,	3, 8, 0, 4, 3, 4, 3, 7, 4, 2, 5, 1,
5, 3, 3, 0, 8, 0, 7, 2, 5, 8, 8, 8, 6,	1, 7, 0, 0, 6, 3, 3, 0, 5, 3, 5, 3,	1, 7, 0, 0, 6, 3, 3, 0, 5, 3, 5, 3,
9, 6, 3, 9, 0, 5, 1, 3, 1, 3, 3, 2, 8,	8, 9, 0, 6, 7, 2, 2, 0, 3, 4, 0, 3,	8, 9, 0, 6, 7, 2, 2, 0, 3, 4, 0, 3,
4, 7, 5, 6, 5, 6, 8, 3, 7, 9, 7, 1, 9,	0, 1, 3, 2, 9, 1, 6, 3, 4, 2, 4, 0,	0, 1, 3, 2, 9, 1, 6, 3, 4, 2, 4, 0,
5, 8, 4, 3, 5, 5, 8, 7, 4, 7, 6, 5, 6,	0, 8, 6, 5, 4, 3, 2, 9, 9, 7, 4, 6,	0, 8, 6, 5, 4, 3, 2, 9, 9, 7, 4, 6,
7, 7, 9, 2, 4, 7, 5, 0, 9, 8, 1, 5, 1,	1, 2, 5, 0, 6, 6, 5, 1, 1, 1, 3, 2,	1, 2, 5, 0, 6, 6, 5, 1, 1, 1, 3, 2,
6, 1, 2, 9, 1, 3, 5, 0, 7, 5, 5, 0, 2,	3, 2, 5, 2, 1, 4, 2, 5, 7, 5, 3, 3,	3, 2, 5, 2, 1, 4, 2, 5, 7, 5, 3, 3,
4, 0, 3, 6, 9, 1, 4, 0, 3, 3, 2, 3, 5,	0, 8, 0, 7, 2, 5, 8, 8, 8, 6, 9, 6,	0, 8, 0, 7, 2, 5, 8, 8, 8, 6, 9, 6,
3, 4, 2, 5, 7, 4, 4, 4, 7, 2, 5, 6, 9,	3, 9, 0, 5, 1, 3, 1, 3, 3, 2, 8, 4,	3, 9, 0, 5, 1, 3, 1, 3, 3, 2, 8, 4,
1, 9, 0, 6, 3, 1, 2, 6, 8, 9, 2, 5, 9,	7, 5, 6, 5, 6, 8, 3, 7, 9, 7, 1, 9,	7, 5, 6, 5, 6, 8, 3, 7, 9, 7, 1, 9,
9, 1, 4, 9, 0, 2, 3, 2, 3, 1, 0, 5, 2,	5, 8, 4, 3, 5, 5, 8, 7, 4, 7, 6, 5,	5, 8, 4, 3, 5, 5, 8, 7, 4, 7, 6, 5,
4, 3, 7, 1, 5, 2, 4, 9, 1, 9, 4, 7, 8,	6, 7, 7, 9, 2, 4, 7, 5, 0, 9, 8, 1,	6, 7, 7, 9, 2, 4, 7, 5, 0, 9, 8, 1,
4, 4, 7, 6, 6, 2, 4, 9, 2, 7, 2, 0, 7,	5, 1, 6, 1, 2, 9, 1, 3, 5, 0, 7, 5,	5, 1, 6, 1, 2, 9, 1, 3, 5, 0, 7, 5,
3, 0, 8, 7, 2, 6, 3, 6, 9, 6, 0, 9, 0,	5, 0, 2, 4, 0, 3, 6, 9, 1, 4, 0, 3,	5, 0, 2, 4, 0, 3, 6, 9, 1, 4, 0, 3,
4, 4, 8, 2, 3, 5, 7, 4, 3, 7, 9, 2, 4,	3, 2, 3, 5, 3, 4, 2, 5, 7, 4, 4, 4,	3, 2, 3, 5, 3, 4, 2, 5, 7, 4, 4, 4,
0, 2, 1, 7, 2, 6, 7, 3, 6, 4, 8, 1, 2,	7, 2, 5, 6, 9, 1, 9, 0, 6, 3, 1, 2,	7, 2, 5, 6, 9, 1, 9, 0, 6, 3, 1, 2,
1, 8, 5, 9, 9, 3, 7, 5, 2, 0, 5, 2, 3,	6, 8, 9, 2, 5, 9, 9, 1, 4, 9, 0, 2,	6, 8, 9, 2, 5, 9, 9, 1, 4, 9, 0, 2,
5, 4, 4, 8, 4, 9, 1, 1, 6, 3, 7, 2, 9,	3, 2, 3, 1, 0, 5, 2, 4, 3, 7, 1, 5,	3, 2, 3, 1, 0, 5, 2, 4, 3, 7, 1, 5,
1, 1, 3, 8, 7, 1, 3, 7, 4, 7, 1, 6, 5,	2, 4, 9, 1, 9, 4, 7, 8, 4, 4, 7, 6,	2, 4, 9, 1, 9, 4, 7, 8, 4, 4, 7, 6,
0, 5, 0, 7, 0, 5, 3, 4, 1, 8, 4, 3, 8,	6, 2, 4, 9, 2, 7, 2, 0, 7, 3, 0, 8,	6, 2, 4, 9, 2, 7, 2, 0, 7, 3, 0, 8,
1, 0, 0, 7, 2, 6, 6, 0, 2, 9, 3, 0, 5,	7, 2, 6, 3, 6, 9, 6, 0, 9, 0, 4, 4,	7, 2, 6, 3, 6, 9, 6, 0, 9, 0, 4, 4,
4, 2, 6, 1, 0, 4, 0, 4, 5, 7, 9, 7, 2,	8, 2, 3, 5, 7, 4, 3, 7, 9, 2, 4, 0,	8, 2, 3, 5, 7, 4, 3, 7, 9, 2, 4, 0,
8, 1, 3, 0, 0, 7, 8, 8, 6, 0, 0, 7, 4,	2, 1, 7, 2, 6, 7, 3, 6, 4, 8, 1, 2,	2, 1, 7, 2, 6, 7, 3, 6, 4, 8, 1, 2,
7, 8, 9, 1, 4, 0, 6, 2, 2, 4, 3, 7, 8,	1, 8, 5, 9, 9, 3, 7, 5, 2, 0, 5, 2,	1, 8, 5, 9, 9, 3, 7, 5, 2, 0, 5, 2,
2, 2, 9, 3, 2, 3, 8, 0, 6, 5, 8, 6, 4,	3, 5, 4, 4, 8, 4, 9, 1, 1, 6, 3, 7,	3, 5, 4, 4, 8, 4, 9, 1, 1, 6, 3, 7,
2, 0, 5, 1, 6, 5, 8, 5, 2, 7, 2, 4, 8, 3, 7, 4, 9, 3, 6, 3, 7, 7, 3, 3, 7, 8	2, 9, 1, 1, 3, 8, 7, 1, 3, 7, 4, 7,	2, 9, 1, 1, 3, 8, 7, 1, 3, 7, 4, 7, 1, 6, 5, 6, 7, 6, 5, 3, 4, 1
3, 7, 4, 9, 3, 6, 3, 7, 7, 3, 3, 7, 0, 4, 8, 8, 1, 1, 1, 3, 2, 4, 5, 3, 2, 2	1, 6, 5, 0, 5, 0, 7, 0, 5, 3, 4, 1,	1, 6, 5, 0, 5, 0, 7, 0, 5, 3, 4, 1,
4, 8, 8, 1, 1, 1, 3, 2, 4, 5, 3, 2, 2,	8, 4, 3, 8, 1, 0, 0, 7, 2, 6, 6, 0,	8, 4, 3, 8, 1, 0, 0, 7, 2, 6, 6, 0,
5, 7, 1, 7, 0, 2, 0, 0, 7, 7, 6, 2, 6,	2, 9, 3, 0, 5, 4, 2, 6, 1, 0, 4, 0,	2, 9, 3, 0, 5, 4, 2, 6, 1, 0, 4, 0, 4, 5, 7, 9, 7, 2, 8, 1, 3, 0, 0, 7,
7 0 1 7 1 7 1 3 0		. 4 7 / 9 / / 8   3 / 1 / 1
7, 9, 1, 7, 1, 7,snip 1, 2, 8,	4, 5, 7, 9, 7, 2, 8, 1, 3, 0, 0, 7,	
7, 9, 1, 7, 1, 7,snip 1, 2, 8, 7, 4, 9, 4, 8, 6, 2, 1, 6, 5, 8, 6, 0, 1, 2, 0, 6, 6, 6, 4, 4, 7, 2, 3, 7, 7,	8, 8, 6, 0, 0, 7, 4, 7, 8, 9, 1, 4, 0, 6, 2, 2, 4, 3, 7, 8, 2, 2, 9, 3,	8, 8, 6, 0, 0, 7, 4, 7, 8, 9, 1, 4, 0, 6, 2, 2, 4, 3, 7, 8, 2, 2, 9, 3,

Test	Expected	Got
6, 8, 3, 8, 3, 4, 6, 1, 7, 1, 1, 1, 0,	2, 3, 8, 0, 6, 5, 8, 6, 4, 2, 0, 5,	2, 3, 8, 0, 6, 5, 8, 6, 4, 2, 0, 5,
2, 5, 1, 4, 3, 1, 8, 9, 8, 3, 3, 5, 2,	1, 6, 5, 8, 5, 2, 7, 2, 4, 8, 3, 7,	1, 6, 5, 8, 5, 2, 7, 2, 4, 8, 3, 7,
9, 9, 4, 0, 1, 8, 4, 1, 1, 3, 1, 8, 3, 0, 4, 4, 4, 5, 3, 0, 3, 5, 4, 0, 4, 3,	4, 9, 3, 6, 3, 7, 7, 3, 3, 7, 0, 4,         8, 8, 1, 1, 1, 3, 2, 4, 5, 3, 2, 2,	4, 9, 3, 6, 3, 7, 7, 3, 3, 7, 0, 4, 8, 8, 1, 1, 1, 3, 2, 4, 5, 3, 2, 2,
8, 2, 6, 1, 9, 5, 7, 0, 5, 6, 5, 7, 0,	5, 7, 1, 7, 0, 2, 0, 0, 7, 7, 6, 2,	5, 7, 1, 7, 0, 2, 0, 0, 7, 7, 6, 2,
5, 8, 7, 2, 6, 2, 0, 9, 1, 6, 7, 4, 9,	6, 7, 9, 1, 7, 1, 7, 6, 8, 2, 3,	6, 7, 9, 1, 7, 1, 7, 6, 8, 2, 3,
6, 4, 6, 7, 6, 7, 4, 4, 4, 1, 7, 5, 2, 4, 1, 1, 2, 1, 1, 2, 2, 3, 3, 9, 7, 1,	snip, 9, 9, 9, 8, 9, 13, 10, 15, 16, 9, 12, 5, 3, 8, 13, 6, 10, 4,	snip, 9, 9, 9, 8, 9, 13, 10, 15, 16, 9, 12, 5, 3, 8, 13, 6, 10, 4,
0, 2, 7, 3, 4, 2, 8, 3, 7, 4, 3, 4, 2,	8, 8, 3, 8, 3, 4, 3, 7, 11, 16, 8, 3,	8, 8, 3, 8, 3, 4, 3, 7, 11, 16, 8, 3,
8, 1, 7, 4, 8, 5, 7, 1, 3, 0, 2, 9, 8,	6, 14, 8, 7, 4, 16, 7, 11, 4, 12, 4,	6, 14, 8, 7, 4, 16, 7, 11, 4, 12, 4,
0, 0, 7, 1, 1, 8, 8, 9, 5, 6, 9, 0, 9,	8, 17, 7, 10, 10, 10, 12, 15, 1, 6,	8, 17, 7, 10, 10, 10, 12, 15, 1, 6,
5, 8, 3, 3, 8, 3, 0, 2, 3, 2, 0, 7, 7, 1, 9, 3, 5, 2, 5, 3, 9, 3, 6, 1, 3, 2,	7, 2, 11, 15, 2, 9, 11, 3, 7, 14, 15, 13, 9, 14, 16, 4, 18, 6, 17, 7, 5,	7, 2, 11, 15, 2, 9, 11, 3, 7, 14, 15, 13, 9, 14, 16, 4, 18, 6, 17, 7, 5,
0, 8, 4, 7, 5, 1, 1, 1, 2, 2, 0, 5, 6,	13, 4, 7, 5, 7, 4, 5, 7, 8, 4, 11, 6,	13, 4, 7, 5, 7, 4, 5, 7, 8, 4, 11, 6,
8, 0, 4, 7, 0, 0, 8, 1, 8, 1, 0, 3, 1,	7, 2, 14, 7, 10, 12, 15, 6, 5, 11, 8,	7, 2, 14, 7, 10, 12, 15, 6, 5, 11, 8,
0, 2, 4, 4, 7, 6, 1, 7, 9, 1, 8, 3, 8, 6, 6, 5, 1, 6, 4, 2, 9, 7, 1, 0, 5, 5,	14, 6, 8, 8, 7, 1, 10, 3, 11, 6, 10, 8, 15, 4, 8, 11, 7, 5, 10, 5, 11, 6,	14, 6, 8, 8, 7, 1, 10, 3, 11, 6, 10, 8, 15, 4, 8, 11, 7, 5, 10, 5, 11, 6,
7, 4, 3, 0, 8, 4, 8, 4, 6, 4, 8, 1, 6,	3, 5, 4, 3, 2, 8, 5, 16, 12, 4, 7,	3, 5, 4, 3, 2, 8, 5, 16, 12, 4, 7,
1, 4, 6, 5, 2, 4, 0, 6, 5, 1, 1, 2, 2,	13, 3, 8, 8, 13, 13, 6, 10, 4, 7, 13,	13, 3, 8, 8, 13, 13, 6, 10, 4, 7, 13,
6, 7, 1, 3, 2, 2, 3, 7, 0, 0, 3, 0, 2,	4, 10, 13, 2, 5, 6, 13, 16, 4, 8, 7,	4, 10, 13, 2, 5, 6, 13, 16, 4, 8, 7,
1, 6, 7, 7, 4, 4, 2, 0, 7, 0, 8, 0, 7, 0, 2, 0, 5, 4, 3, 5, 9, 1, 6, 6, 8, 9,	12, 6, 17, 11, 13, 10, 13, 7, 13, 5, 11, 14, 10, 7, 7, 4, 14, 10, 10, 2,	12, 6, 17, 11, 13, 10, 13, 7, 13, 5, 11, 14, 10, 7, 7, 4, 14, 10, 10, 2,
3, 1, 6, 6, 0, 7, 8, 8, 9, 1, 1, 9, 8,	9, 11, 13, 10, 9, 9, 7, 8, 8, 14, 4,	9, 11, 13, 10, 9, 9, 7, 8, 8, 14, 4,
1, 7, 1, 5, 3, 1, 5, 2, 5, 7, 3, 3, 9,	8, 5, 3, 5, 2, 9, 8, 12, 4, 13, 5, 6,	8, 5, 3, 5, 2, 9, 8, 12, 4, 13, 5, 6,
5, 0, 1, 1, 8, 3, 4, 9, 3, 3, 7, 0, 0,	16, 6, 16, 8, 15, 5, 4, 7, 5, 12, 3,	16, 6, 16, 8, 15, 5, 4, 7, 5, 12, 3,
9, 8, 1, 4, 5, 3, 1, 6, 0, 2, 4, 0, 9, 9, 2, 5, 9, 8, 8, 4, 1, 4, 1, 8, 1, 6,	8, 12, 6, 13, 11, 10, 13, 4, 3, 11, 8, 3, 9, 11, 9, 10, 2, 6, 15, 14, 1,	8, 12, 6, 13, 11, 10, 13, 4, 3, 11, 8, 3, 9, 11, 9, 10, 2, 6, 15, 14, 1,
6, 2, 6, 1, 4, 9, 3, 1, 6, 6, 8, 6, 5,	12, 3, 6, 9, 5, 12, 11, 14, 9, 6, 7,	12, 3, 6, 9, 5, 12, 11, 14, 9, 6, 7,
0, 4, 9, 8, 3, 4, 4, 0, 5, 4, 5, 5, 5,	14, 11, 8, 1, 1, 12, 5, 8, 12, 9, 4,	14, 11, 8, 1, 1, 12, 5, 8, 12, 9, 4,
4, 4, 1, 9, 3, 5, 3, 5, 3, 4, 0, 8, 6, 4, 9, 6, 8, 7, 7, 0, 5, 2, 2, 7, 2, 2,	16, 2, 3, 10, 8, 4, 4, 9, 6, 1, 8, 2, 9, 10, 0, 18, 17, 5, 10, 12, 13, 8,	16, 2, 3, 10, 8, 4, 4, 9, 6, 1, 8, 2, 9, 10, 0, 18, 17, 5, 10, 12, 13, 8,
2, 5, 0, 2, 7, 2, 3, 0, 8, 2, 9, 5, 4,	7, 4, 10, 1, 8, 8, 7, 7, 7, 8, 5, 11,	7, 4, 10, 1, 8, 8, 7, 7, 7, 8, 5, 11,
5, 0, 4, 6, 2, 2, 7, 7, 9, 1, 2, 6, 5,	12, 7, 4, 10, 6, 16, 9, 10, 4, 9, 18,	12, 7, 4, 10, 6, 16, 9, 10, 4, 9, 18,
8, 2, 3, 6, 5, 9, 3, 3, 9, 7, 7, 0, 5,	9, 7, 4, 6, 6, 12, 11, 13, 13, 10, 4,	9, 7, 4, 6, 6, 12, 11, 13, 13, 10, 4,
4, 6, 3, 2, 2, 4, 1, 9, 8, 7, 7, 7, 8,       2, 4, 1, 0, 7, 8, 8, 1, 2, 1, 8, 7, 6,	10, 3, 11, 10, 8, 11, 5, 8, 13, 6, 10, 15, 8, 18, 15, 15, 13, 10, 5, 9,	10, 3, 11, 10, 8, 11, 5, 8, 13, 6, 10, 15, 8, 18, 15, 15, 13, 10, 5, 9,
9, 1, 7, 8, 0, 3, 0, 5, 1, 4, 6, 7, 5,	10, 3, 15, 7, 10, 2, 6, 9, 6, 12, 8,	10, 3, 15, 7, 10, 2, 6, 9, 6, 12, 8,
9, 5, 7, 8, 4, 2, 7, 7, 0, 4, 7, 9, 1,	4, 9, 14, 11, 9, 8, 12, 6, 1, 4, 11,	4, 9, 14, 11, 9, 8, 12, 6, 1, 4, 11,
3, 6, 1, 9, 4, 6, 3, 8, 4, 1, 8, 9, 5, 2, 4, 1, 7, 7, 8, 1, 0, 6, 8, 0, 1, 3,	11, 6, 9, 8, 9, 6, 5, 14, 8, 9, 10, 3, 12, 10, 16, 6, 8, 16, 11, 7, 3,	11, 6, 9, 8, 9, 6, 5, 14, 8, 9, 10, 3, 12, 10, 16, 6, 8, 16, 11, 7, 3,
4, 1, 8, 7, 4, 8, 1, 7, 2, 5, 3, 0, 7,	11, 10, 14, 7, 2, 10, 13, 9, 10, 12,	11, 10, 14, 7, 2, 10, 13, 9, 10, 12,
5, 0, 1, 2, 0, 5, 5, 9, 7, 4, 4, 6, 3,	7, 7, 15, 13, 4, 7, 2, 8, 7, 9, 14,	7, 7, 15, 13, 4, 7, 2, 8, 7, 9, 14,
4, 9, 1, 7, 3, 1, 8, 0, 4, 4, 1, 4, 4,	5, 11, 1, 8, 15, 8, 13, 3, 8, 9, 4, 9, 2, 10, 8, 9, 9, 14, 10, 12, 8, 15,	5, 11, 1, 8, 15, 8, 13, 3, 8, 9, 4, 9, 2, 10, 8, 9, 9, 14, 10, 12, 8, 15,
6, 3, 7, 0, 4, 9, 4, 2, 4, 9, 2, 2, 7, 9, 6, 8, 3, 2, 8, 2, 7, 0, 0, 5, 0, 2,	14, 4, 6, 13, 12, 0, 12, 9, 14, 9,	14, 4, 6, 13, 12, 0, 12, 9, 14, 9,
5, 3, 7, 0, 8, 6, 2, 2, 7, 3, 3, 6, 7,	11, 10, 9, 9, 10, 9, 5, 11, 9, 10,	11, 10, 9, 9, 10, 9, 5, 11, 9, 10,
4, 1, 0, 1, 6, 3, 6, 1, 3, 0, 1, 2, 7,	11, 9, 13, 3, 5, 8, 16, 10, 12, 9, 8,	11, 9, 13, 3, 5, 8, 16, 10, 12, 9, 8,
5, 8, 5, 0, 1, 2, 2, 5, 2, 1, 3, 3, 8, 4, 5, 3, 8, 7, 6, 9, 9, 4, 7, 2, 6, 9,	7, 11, 6, 1, 4, 8, 5, 12, 14, 4, 12, 6, 10, 6, 13, 11, 2, 7, 13, 5, 5, 6,	7, 11, 6, 1, 4, 8, 5, 12, 14, 4, 12, 6, 10, 6, 13, 11, 2, 7, 13, 5, 5, 6,
7, 5, 7, 5, 7, 2, 2, 7, 6, 6, 7, 5, 5,	7, 13, 14, 13, 12, 5, 6, 9, 12, 9, 9,	7, 13, 14, 13, 12, 5, 6, 9, 12, 9, 9,
8, 4, 5, 3, 1, 9, 6, 7, 4, 4, 1, 7, 5,	10, 15, 3, 8, 17, 3, 9, 13, 10, 8,	10, 15, 3, 8, 17, 3, 9, 13, 10, 8,
7, 0, 4, 5, 9, 8, 8, 9, 2, 5, 1, 2, 8, 5, 3, 5, 2, 8, 4, 0, 7, 9, 9, 8, 6, 4,	13, 10, 3, 8, 1, 4, 9, 8, 9, 8, 16, 9, 7, 16, 15, 8, 10, 9, 9, 16, 5, 8,	13, 10, 3, 8, 1, 4, 9, 8, 9, 8, 16, 9, 7, 16, 15, 8, 10, 9, 9, 16, 5, 8,
9, 7, 4, 2, 8, 2, 0, 4, 2, 5, 5, 6, 5,	6, 3, 6, 4, 9, 13, 7, 7, 8, 13, 13,	6, 3, 6, 4, 9, 13, 7, 7, 8, 13, 13,
5, 0, 5, 6, 3, 9, 7, 6, 4, 5, 9, 3, 2,	8, 9, 7, 11, 12, 12, 11, 4, 9, 6, 7,	8, 9, 7, 11, 12, 12, 11, 4, 9, 6, 7,
6, 4, 1, 7, 6, 1, 9, 2, 7, 0, 5, 1, 5,	14, 6, 7, 1, 11, 1, 7, 8, 16, 13, 16,	14, 6, 7, 1, 11, 1, 7, 8, 16, 13, 16,
8, 5, 6, 3, 4, 6, 5, 1, 8, 7, 7, 9, 4, 5, 9, 7, 1, 7, 4, 3, 2, 5, 1, 3, 1, 7,	13, 5, 3, 6, 4, 8, 8, 6, 3, 7, 8, 7, 6, 8, 8, 14, 14, 9, 9, 11, 8, 6, 6,	13, 5, 3, 6, 4, 8, 8, 6, 3, 7, 8, 7, 6, 8, 8, 14, 14, 9, 9, 11, 8, 6, 6,
5, 2, 8, 8, 6, 5, 5, 0, 8, 3, 8, 9, 0,	16, 7, 9, 7, 5, 16, 9, 2, 10, 6, 15,	16, 7, 9, 7, 5, 16, 9, 2, 10, 6, 15,
9, 7, 6, 2, 7, 0, 4, 6, 7, 0, 2, 4, 0,	16, 12, 7, 9, 10, 14, 4, 7, 13, 10,	16, 12, 7, 9, 10, 14, 4, 7, 13, 10,
5, 5, 0, 4, 3, 2, 7, 2, 3, 7, 5, 3, 4, 3, 0, 4, 1, 2, 8, 8, 5, 0, 9, 8, 0, 0,	11, 5, 9, 7, 14, 8, 15, 4, 9, 7, 15, 10, 11, 14, 9, 12, 7, 4, 15, 6, 9,	11, 5, 9, 7, 14, 8, 15, 4, 9, 7, 15, 10, 11, 14, 9, 12, 7, 4, 15, 6, 9,
9, 2, 5, 7, 6, 7, 0, 1, 0, 2, 6, 8, 2,	12, 3, 14, 10, 8, 9, 16, 10, 8, 14,	12, 3, 14, 10, 8, 9, 16, 10, 8, 14,
0, 9, 9, 1, 4, 9, 6, 5, 5, 4, 7, 5, 3,	8, 14, 16, 10, 9, 14, 3, 5, 12, 8,	8, 14, 16, 10, 9, 14, 3, 5, 12, 8,
0, 0, 9, 9, 1, 3, 9, 9, 5, 0, 8, 5, 0,	14, 14, 9, 8, 13, 8, 14, 8, 9, 9, 16,	14, 14, 9, 8, 13, 8, 14, 8, 9, 9, 16,
		. I

Test	Expected	Got
1, 2, 0, 0, 7, 9, 8, 1, 4, 3, 0, 1, 7,	12, 8, 9, 15, 11, 7, 8, 7, 3, 13, 8,	12, 8, 9, 15, 11, 7, 8, 7, 3, 13, 8,
8, 1, 9, 4, 0, 4, 6, 4, 6, 3, 4, 5, 9,	4, 13, 2, 11, 9, 6, 2, 6, 13, 10, 6,	4, 13, 2, 11, 9, 6, 2, 6, 13, 10, 6,
5, 4, 6, 3, 4, 2, 7, 2, 3, 6, 5, 0, 9,	5, 8, 13, 11, 10, 10, 10, 15, 16, 7,	5, 8, 13, 11, 10, 10, 10, 15, 16, 7,
2, 2, 7, 0, 7, 8, 2, 9, 8, 9, 3, 6, 5,	11, 9, 13, 6, 7, 10, 8, 2, 12, 2, 8,	11, 9, 13, 6, 7, 10, 8, 2, 12, 2, 8,
4, 6, 2, 9, 4, 1, 7, 1, 3, 4, 9, 5, 7,	7, 12, 10, 5, 14, 12, 9, 11, 13, 7,	7, 12, 10, 5, 14, 12, 9, 11, 13, 7,
0, 8, 9, 8, 1, 0, 8, 5, 3, 3, 1, 3, 2,	16, 4, 14, 10, 8, 18, 15, 12, 4, 7,	16, 4, 14, 10, 8, 18, 15, 12, 4, 7,
4, 3, 5, 9, 9, 9, 8, 5, 8, 2, 2, 9, 6,	0, 7, 10, 8, 8, 6, 4, 3, 7, 6, 1, 13,	0, 7, 10, 8, 8, 6, 4, 3, 7, 6, 1, 13,
3, 0, 8, 9, 7, 8, 1, 8, 1, 8, 3, 4, 8,	5, 3, 8, 7, 11, 13, 14, 8, 6, 9, 8,	5, 3, 8, 7, 11, 13, 14, 8, 6, 9, 8,
7, 9, 0, 0, 8, 1, 9, 9, 2, 2, 2, 8, 8,	8, 1, 4, 11, 13, 7, 2, 14, 16, 3, 2,	8, 1, 4, 11, 13, 7, 2, 14, 16, 3, 2,
2, 6, 5, 9, 3, 0, 0, 9, 1, 8, 4, 4, 1,	18, 10, 9, 13, 6, 12, 7, 5, 7, 8, 11,	18, 10, 9, 13, 6, 12, 7, 5, 7, 8, 11,
0, 7, 1, 4, 6, 7, 4, 1, 8, 1, 8, 4, 8,	13, 9, 5, 14, 11, 1, 4, 17, 11, 9,	13, 9, 5, 14, 11, 1, 4, 17, 11, 9,
2, 7, 6, 6, 4, 5, 5, 4, 4, 1, 8, 6, 2,	13, 10, 8, 9, 6, 8, 9, 11, 12, 1, 12,	13, 10, 8, 9, 6, 8, 9, 11, 12, 1, 12,
9, 3, 6, 3, 5, 4, 7, 2, 2, 6, 5, 5, 4,	9, 11, 5, 2, 12, 10, 3, 8, 6, 5, 8,	9, 11, 5, 2, 12, 10, 3, 8, 6, 5, 8,
8, 4, 4, 2, 8, 4, 6, 9, 8, 6, 7, 7, 8,	11, 18, 11, 2, 7, 7, 0, 2, 10, 13, 7,	11, 18, 11, 2, 7, 7, 0, 2, 10, 13, 7,
1, 7, 3, 7, 1, 3, 0, 9, 2, 5, 3, 5, 3,	11, 12, 6, 9, 7, 13, 12, 6, 11, 12,	11, 12, 6, 9, 7, 13, 12, 6, 11, 12,
8, 1, 8, 6, 7, 6, 7, 5, 6, 2, 7, 7, 4,	13, 10, 13, 14, 5, 13, 2, 10, 9, 10,	13, 10, 13, 14, 5, 13, 2, 10, 9, 10,
2, 0, 1, 5, 2, 2, 6, 7, 2, 6, 0, 6, 3,	7, 11, 6, 16, 2, 2, 9, 3, 8, 16, 6,	7, 11, 6, 16, 2, 2, 9, 3, 8, 16, 6,
1, 3, 0, 4, 7, 5, 6, 5, 1, 9, 6, 8, 2,	9, 17, 15, 12, 13, 12, 7, 8, 7, 14,	9, 17, 15, 12, 13, 12, 7, 8, 7, 14,
5, 2, 7, 7, 8, 1, 8, 2, 8, 5, 3, 4, 8,	9, 2, 10, 2, 5, 5, 13, 11, 7, 5, 16,	9, 2, 10, 2, 5, 5, 13, 11, 7, 5, 16,
9, 4, 7, 8, 5, 8, 3, 9, 7, 4, 0, 2, 2,	15, 16, 8, 6, 12, 10, 4, 4, 8, 8, 10,	15, 16, 8, 6, 12, 10, 4, 4, 8, 8, 10,
1, 8, 3, 2, 6, 9, 9, 4, 1, 4, 7, 5, 0,	10, 9, 9, 13, 13, 10, 8, 14, 15, 5,	10, 9, 9, 13, 13, 10, 8, 14, 15, 5,
3, 0, 4, 2, 4, 2, 2, 4, 6, 0, 2, 9, 6,	3, 15, 7, 4, 5, 17, 16, 14, 17, 3,	3, 15, 7, 4, 5, 17, 16, 14, 17, 3,
2, 9, 1, 6, 3, 5, 5, 6, 7, 7, 8, 8, 0,	14, 8, 14, 6, 13, 11, 11, 18, 3, 6,	14, 8, 14, 6, 13, 11, 11, 18, 3, 6,
2, 6, 5, 1, 2, 7, 5, 3, 0, 0, 8, 4, 2,	17, 1, 15, 12, 2, 6, 7, 8, 17, 6, 7,	17, 1, 15, 12, 2, 6, 7, 8, 17, 6, 7,
0, 7, 7, 0, 4, 0, 3, 2, 8, 5, 7, 4, 7,	12, 11, 3, 3, 7, 15, 2, 14, 10, 7, 6,	12, 11, 3, 3, 7, 15, 2, 14, 10, 7, 6,
0, 0, 2, 2, 8, 9, 3, 2, 3, 9, 5, 5, 2,	6, 11, 7, 7, 6, 11, 6, 1, 17, 5, 16,	6, 11, 7, 7, 6, 11, 6, 1, 17, 5, 16,
0, 6, 6, 9, 9, 5, 8, 7, 3, 0, 7, 2, 2,	8, 8, 9, 12, 12, 14, 12, 14, 6, 4,	8, 8, 9, 12, 12, 14, 12, 14, 6, 4,
4, 9, 9, 3, 3, 0, 1, 5, 8, 4, 2, 9, 6,	12, 1, 10, 13, 3, 15, 7, 14, 12, 9,	12, 1, 10, 13, 3, 15, 7, 14, 12, 9,
5, 0, 7, 2, 5, 1, 2, 7, 4, 5, 1, 6, 8,	8, 7, 9, 6, 8, 8, 12, 10, 17, 5, 6,	8, 7, 9, 6, 8, 8, 12, 10, 17, 5, 6,
7, 5, 4, 9, 2, 6, 8, 4, 9, 6, 3, 3, 0,	3, 9, 11, 8, 18, 17, 15, 13, 11, 11,	3, 9, 11, 8, 18, 17, 15, 13, 11, 11,
1, 4, 4, 0};	9, 13, 11, 12, 2, 6, 1, 16, 10, 9, 8,	9, 13, 11, 12, 2, 6, 1, 16, 10, 9, 8,
LLNode* head =	13, 5, 9, 10, 15, 8, 10, 8, 9, 5, 14,	13, 5, 9, 10, 15, 8, 10, 8, 9, 5, 14,
${\tt LLNode} :: {\tt createWithIterators(arr, arr} + {\tt def} {\tt createWithIterators(arr, arr} + {\tt def} {\tt createWithIterators(arr, arr}) + {\tt def} {\tt createWithIterators(arr, arr)} + {\tt def} {\tt createWithIterators(arr)} + {\tt def} {\tt createWi$	8, 8, 15, 12, 9, 3, 1, 7, 6, 9, 12,	8, 8, 15, 12, 9, 3, 1, 7, 6, 9, 12,
<pre>sizeof(arr) / sizeof(int));</pre>	8, 7, 8, 2, 15, 3, 10, 12, 7, 6, 10,	8, 7, 8, 2, 15, 3, 10, 12, 7, 6, 10,
<pre>LLNode::printList(head);</pre>	9, 12, 14, 4, 16, 13, 11, 2, 10, 8,	9, 12, 14, 4, 16, 13, 11, 2, 10, 8,
cout << "\n";	15, 14, 11, 4, 14, 3, 12, 10, 11, 6,	15, 14, 11, 4, 14, 3, 12, 10, 11, 6,
LLNode* newhead =	8, 18, 9, 11, 13, 6, 17, 4, 16, 11,	8, 18, 9, 11, 13, 6, 17, 4, 16, 11,
<pre>foldLinkedList(head);</pre>	10, 4, 3, 3, 1, 17, 11, 5, 10, 17,	10, 4, 3, 3, 1, 17, 11, 5, 10, 17,
<pre>LLNode::printList(newhead);</pre>	10, 8, 9, 13, 11, 8, 8, 4, 7, 13, 11,	10, 8, 9, 13, 11, 8, 8, 4, 7, 13, 11,
	7, 2, 8, 11, 14, 8, 11, 17, 8, 11,	7, 2, 8, 11, 14, 8, 11, 17, 8, 11,
	10, 7, 14, 7, 6, 14, 7, 14, 12, 11,	10, 7, 14, 7, 6, 14, 7, 14, 12, 11,
	10, 1, 7, 12, 5, 3, 6, 13, 11, 4, 7,	10, 1, 7, 12, 5, 3, 6, 13, 11, 4, 7,
	3, 13, 9, 10, 2, 16, 8, 7, 5, 3, 10,	3, 13, 9, 10, 2, 16, 8, 7, 5, 3, 10,
	10, 16, 6, 10, 8, 12, 8, 7, 6, 5, 16,	10, 16, 6, 10, 8, 12, 8, 7, 6, 5, 16,
	11, 12, 3, 6, 18, 13, 9, 4, 3, 8, 15,	11, 12, 3, 6, 18, 13, 9, 4, 3, 8, 15,
	12, 12, 10, 8, 10, 9, 9, 16, 6, 11,	12, 12, 10, 8, 10, 9, 9, 16, 6, 11,
	8, 18, 11, 11, 3, 0, 8, 12, 15, 11,	8, 18, 11, 11, 3, 0, 8, 12, 15, 11,
	6, 10, 13, 12, 1, 14, 5, 10, 3, 6,	6, 10, 13, 12, 1, 14, 5, 10, 3, 6,
	11, 10, 8, 4, 10, 17, 8, 7, 8, 17, 6,	11, 10, 8, 4, 10, 17, 8, 7, 8, 17, 6,
	10, 8, 13, 16, 13, 6, 4, 3, 3, 12, 9,	10, 8, 13, 16, 13, 6, 4, 3, 3, 12, 9,
	1 =	6]

Passed all tests! ✓

Chính xác

Điểm cho bài nộp này: 1,00/1,00.

# Câu hỏi 11

Chính xác

Điểm 1,00 của 1,00

Class LLNode representing a node of singly linked lists is declared as below:

```
class LLNode {
public:
    int val;
    LLNode* next;
    LLNode(); // Constructor: val = 0, next = nullptr
    LLNode(int val, LLNode* next); // Constructor with customized data
}
```

Given a singly linked list head node.

Your task is to implement a function with following prototype:

```
LLNode* replaceFirstGreater(LLNode* head);
```

The function returns head node of the singly linked list after replacing every node's value with the first greater node's value to its right. If a node doesn't have a next greater node, set its value to 0.

### Note:

- The iostream and stack libraries have been included and namespace std is being used. No other libraries are allowed.
- The constructors and methods of class LLNode have been defined fully so you do not need to redefine them.
- You can write helper functions.

Answer: (penalty regime: 0 %)

Reset answer

```
1 | LLNode* replaceFirstGreater(LLNode* head) {
 2
        // STUDENT ANSWER
 3
        LLNode* temp1=head,*temp2;
 4
        while(temp1!=nullptr){
 5
            bool changed=0;
 6
            temp2=temp1->next;
 7
            while(temp2!=nullptr){
                 if(temp1->val<temp2->val){
 8
 9
                     temp1->val=temp2->val;
10
                     changed=1;
11
                     break;
12
                temp2=temp2->next;
13
14
15
            if(!changed){
16
                temp1->val=0;
17
18
            temp1=temp1->next;
        }
19
20
        return head;
21
```

	Test	Expected	Got	
*	<pre>int arr[] = {0, 3, 2, 1, 5}; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = replaceFirstGreater(head); LLNode::printList(newhead);</pre>	[0, 3, 2, 1, 5] [3, 5, 5, 5, 0]	[0, 3, 2, 1, 5] [3, 5, 5, 5, 0]	*
•	<pre>int arr[] = {5, 4, 2, 8, 6, 7}; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = replaceFirstGreater(head); LLNode::printList(newhead);</pre>	[5, 4, 2, 8, 6, 7] [8, 8, 8, 0, 7, 0]	[5, 4, 2, 8, 6, 7] [8, 8, 8, 0, 7, 0]	*
<b>~</b>	<pre>int arr[] = {}; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = replaceFirstGreater(head); LLNode::printList(newhead);</pre>			*
*	<pre>int arr[] = {8, 3, 5, 0, 8, 7, 1, 6, 5, 4}; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = replaceFirstGreater(head); LLNode::printList(newhead);</pre>	[8, 3, 5, 0, 8, 7, 1, 6, 5, 4] [0, 5, 8, 8, 0, 0, 6, 0, 0, 0]	[8, 3, 5, 0, 8, 7, 1, 6, 5, 4] [0, 5, 8, 8, 0, 0, 6, 0, 0, 0]	*
<b>Y</b>	<pre>int arr[] = {8, 1, 8, 1, 6, 9, 7, 8, 4, 0, 7, 6, 1, 0, 3, 4, 3, 7, 3, 3, 5, 0, 3, 7, 3, 8, 4, 9, 9, 0, 9, 7, 2, 5, 2, 5, 0, 1, 7, 4, 9, 1, 2, 2, 4, 2, 9, 7, 0, 0, 7, 3, 8, 8, 1, 7, 7, 7, 8, 1, 0, 7, 6, 3, 7, 3, 0, 3, 0, 2, 2, 7, 7, 2, 2, 4, 5, 2, 2, 1, 1, 8, 6, 8, 1, 4, 7, 1, 5, 5, 7, 5, 5, 3, 0, 0, 5, 4, 1, 8, 4, 7, 1, 7, 8}; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = replaceFirstGreater(head); LLNode::printList(newhead);</pre>	[8, 1, 8, 1, 6, 9, 7, 8, 4, 0, 7, 6, 1, 0, 3, 4, 3, 7, 3, 3, 5, 0, 3, 7, 3, 8, 4, 9, 9, 0, 9, 7, 2, 5, 2, 5, 0, 1, 7, 4, 9, 1, 2, 2, 4, 2, 9, 7, 0, 0, 7, 3, 8, 8, 1, 7, 7, 7, 8, 1, 0, 7, 6, 3, 7, 3, 0, 3, 0, 2, 2, 7, 7, 2, 2, 4, 5, 2, 2, 1, 1, 8, 6, 8, 1, 4, 7, 1, 5, 5, 7, 5, 5, 3, 0, 0, 5, 4, 1, 8, 4, 7, 1, 7, 8] [9, 8, 9, 6, 9, 0, 8, 9, 7, 7, 8, 7, 3, 3, 4, 7, 7, 8, 5, 5, 7, 3, 7, 8, 8, 9, 9, 0, 0, 9, 0, 9, 5, 7, 5, 7, 1, 7, 9, 9, 0, 2, 4, 4, 9, 9, 0, 8, 7, 7, 8, 8, 0, 0, 7, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8,	[8, 1, 8, 1, 6, 9, 7, 8, 4, 0, 7, 6, 1, 0, 3, 4, 3, 7, 3, 3, 5, 0, 3, 7, 3, 8, 4, 9, 9, 0, 9, 7, 2, 5, 2, 5, 0, 1, 7, 4, 9, 1, 2, 2, 4, 2, 9, 7, 0, 0, 7, 3, 8, 8, 1, 7, 7, 7, 8, 1, 0, 7, 6, 3, 7, 3, 0, 3, 0, 2, 2, 7, 7, 2, 2, 4, 5, 2, 2, 1, 1, 8, 6, 8, 1, 4, 7, 1, 5, 5, 7, 5, 5, 3, 0, 0, 5, 4, 1, 8, 4, 7, 1, 7, 8] [9, 8, 9, 6, 9, 0, 8, 9, 7, 7, 8, 7, 3, 3, 4, 7, 7, 8, 5, 5, 7, 3, 7, 8, 8, 9, 9, 0, 0, 9, 0, 9, 5, 7, 5, 7, 1, 7, 9, 9, 0, 2, 4, 4, 9, 9, 0, 8, 7, 7, 8, 8, 0, 0, 7, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8,	*
~	int arr[] = {1, 8, 9, 0, 6, 3, 5, 1, 0, 9, 0, 6, 9, 4, 8, 7, 9, 7, 1, 4, 9, 4, 2, 6, 0, 9, 6, 5, 1, 5, 6, 7, 0, 3, 3, 3, 4, 8, 3, 0, 6, 8, 1, 2, 2, 4, 7,	[1, 8, 9, 0, 6, 3, 5, 1, 0, 9, 0, 6, 9, 4, 8, 7, 9, 7, 1, 4, 9, 4, 2, 6, 0, 9, 6, 5, 1, 5, 6, 7, 0, 3, 3, 3,	[1, 8, 9, 0, 6, 3, 5, 1, 0, 9, 0, 6, 9, 4, 8, 7, 9, 7, 1, 4, 9, 4, 2, 6, 0, 9, 6, 5, 1, 5, 6, 7, 0, 3, 3, 3, 4, 8, 3, 0, 6, 8, 1, 2, 2, 4, 7, 4,	~

Test	Expected	Got
4, 3, 4, 5, 4, 2, 1, 7, 7, 7, 2, 2, 0,	3, 4, 5, 4, 2, 1, 7, 7, 7, 2, 2, 0,	3, 4, 5, 4, 2, 1, 7, 7, 7, 2, 2, 0,
0, 6, 8, 5, 2, 1, 1, 9, 3, 8, 1, 6, 5,	0, 6, 8, 5, 2, 1, 1, 9, 3, 8, 1, 6,	0, 6, 8, 5, 2, 1, 1, 9, 3, 8, 1, 6,
2, 6, 4, 2, 9, 6, 1, 8, 1, 9, 9, 3, 4,	5, 2, 6, 4, 2, 9, 6, 1, 8, 1, 9, 9,	5, 2, 6, 4, 2, 9, 6, 1, 8, 1, 9, 9,
7, 7, 3, 3, 5, 7, 7, 5, 9, 3, 5, 0, 1,	3, 4, 7, 7, 3, 3, 5, 7, 7, 5, 9, 3,	3, 4, 7, 7, 3, 3, 5, 7, 7, 5, 9, 3,
4, 2, 2, 5, 0, 7, 6, 5, 8, 8, 6, 7, 6,	5, 0, 1, 4, 2, 2, 5, 0, 7, 6, 5, 8,	5, 0, 1, 4, 2, 2, 5, 0, 7, 6, 5, 8,
5, 3, 3, 5, 3, 3, 2, 2, 6, 0, 5, 0, 3,	8, 6, 7, 6, 5, 3, 3, 5, 3, 3, 2, 2,	8, 6, 7, 6, 5, 3, 3, 5, 3, 3, 2, 2,
1, 5, 9, 9, 3, 6, 2, 6, 8, 5, 0, 4, 2,	6, 0, 5, 0, 3, 1, 5, 9, 9, 3, 6, 2,	6, 0, 5, 0, 3, 1, 5, 9, 9, 3, 6, 2,
8, 2, 3, 0, 3, 5, 5, 1, 1, 7, 3, 8, 0,	6, 8, 5, 0, 4, 2, 8, 2, 3, 0, 3, 5,	6, 8, 5, 0, 4, 2, 8, 2, 3, 0, 3, 5,
8, 1, 1, 9, 9, 1, 6, 5, 9, 2, 1, 2, 8,	5, 1, 1, 7, 3, 8, 0, 8, 1, 1, 9, 9,	5, 1, 1, 7, 3, 8, 0, 8, 1, 1, 9, 9,
9, 3, 8, 6, 7, 9, 1, 4, 9, 0, 6, 8, 1,	1, 6, 5, 9, 2, 1, 2, 8, 9, 3, 8, 6,	1, 6, 5, 9, 2, 1, 2, 8, 9, 3, 8, 6,
8, 5, 3, 2, 2, 1, 5, 0, 2, 7, 0, 0, 6,	7, 9, 1, 4, 9, 0, 6, 8, 1, 8, 5, 3,	7, 9, 1, 4, 9, 0, 6, 8, 1, 8, 5, 3,
9, 9, 9, 3, 6, 0, 4, 4, 0, 9, 9, 8, 0,	2, 2, 1, 5, 0, 2, 7, 0, 0, 6, 9, 9,	2, 2, 1, 5, 0, 2, 7, 0, 0, 6, 9, 9,
9, 7, 8, 3, 7, 1, 8, 7, 5, 7, 4, 2, 8,	9, 3, 6, 0, 4, 4, 0, 9, 9, 8, 0, 9,	9, 3, 6, 0, 4, 4, 0, 9, 9, 8, 0, 9,
2, 8, 5, 8, 1, 5, 6, 7, 1, 5, 2, 3, 8,	7, 8, 3, 7, 1, 8, 7, 5, 7, 4, 2, 8,	7, 8, 3, 7, 1, 8, 7, 5, 7, 4, 2, 8,
9, 1, 1, 4, 4, 3, 7, 3, 1, 4, 6, 0, 1,	2, 8, 5, 8, 1, 5, 6, 7, 1, 5, 2, 3,	2, 8, 5, 8, 1, 5, 6, 7, 1, 5, 2, 3,
0, 4, 9, 2, 1, 9, 5, 8, 5, 6, 1, 5, 5,	8, 9, 1, 1, 4, 4, 3, 7, 3, 1, 4, 6,	8, 9, 1, 1, 4, 4, 3, 7, 3, 1, 4, 6,
5, 5, 3, 5, 6, 0, 8, 5, 8, 4, 7, 8, 4,	0, 1, 0, 4, 9, 2, 1, 9, 5, 8, 5, 6,	0, 1, 0, 4, 9, 2, 1, 9, 5, 8, 5, 6,
7, 4, 2, 1, 6, 6, 6, 3, 6, 1, 8, 2, 7,	1, 5, 5, 5, 5, 3, 5, 6, 0, 8, 5, 8,	1, 5, 5, 5, 5, 3, 5, 6, 0, 8, 5, 8,
4, 9, 8, 9, 8, 2, 1, 4, 9, 3, 6, 3, 6,		4, 7, 8, 4, 7, 4, 2, 1, 6, 6, 6, 3,
2, 7, 6, 3, 5, 1, 6, 1, 3, 3, 1, 0, 3,		6, 1, 8, 2, 7, 4, 9, 8, 9, 8, 2, 1,
6, 7, 2, 7, 0, 9, 0, 2, 4, 4, 8, 1, 0,	4, 9, 3, 6, 3, 6, 2, 7, 6, 3, 5, 1,	4, 9, 3, 6, 3, 6, 2, 7, 6, 3, 5, 1,
4, 1, 6, 7, 7, 2, 6, 4, 4, 1, 8, 3, 7,	6, 1, 3, 3, 1, 0, 3, 6, 7, 2, 7, 0,	6, 1, 3, 3, 1, 0, 3, 6, 7, 2, 7, 0,
2, 5, 7, 2, 5, 7, 1, 3, 5, 8, 8, 2, 4,	9, 0, 2, 4, 4, 8, 1, 0, 4, 1, 6, 7,	9, 0, 2, 4, 4, 8, 1, 0, 4, 1, 6, 7,
8, 4, 8, 5, 6, 1, 1, 1, 2, 0, 1, 9, 9,		7, 2, 6, 4, 4, 1, 8, 3, 7, 2, 5, 7,
7, 7, 4, 8, 4, 6, 4, 5, 6, 8, 6, 6, 4,	2, 5, 7, 1, 3, 5, 8, 8, 2, 4, 8, 4,	2, 5, 7, 1, 3, 5, 8, 8, 2, 4, 8, 4,
5, 3, 1, 0, 8, 7, 2, 5, 6, 1, 7, 0, 6,	8, 5, 6, 1, 1, 1, 2, 0, 1, 9, 9, 7,	8, 5, 6, 1, 1, 1, 2, 0, 1, 9, 9, 7,
5, 9, 2, 1, 4, 9, 3, 8, 2, 3, 8, 3, 0,	7, 4, 8, 4, 6, 4, 5, 6, 8, 6, 6, 4,	7, 4, 8, 4, 6, 4, 5, 6, 8, 6, 6, 4,
5, 6, 0, 0, 4, 9, 8, 5, 8, 2, 9, 1, 9,	5, 3, 1, 0, 8, 7, 2, 5, 6, 1, 7, 0,	5, 3, 1, 0, 8, 7, 2, 5, 6, 1, 7, 0,
8, 7, 4, 5, 3, 1, 3, 3, 1, 0, 1, 2, 5,		6, 5, 9, 2, 1, 4, 9, 3, 8, 2, 3, 8,
6, 6, 6, 8, 7, 7, 4, 2, 5, 7, 1, 7, 2,	3, 0, 5, 6, 0, 0, 4, 9, 8, 5, 8, 2,	3, 0, 5, 6, 0, 0, 4, 9, 8, 5, 8, 2,
1, 2, 7, 8, 0, 1, 3, 8, 8, 4, 9, 1, 7,	9, 1, 9, 8, 7, 4, 5, 3, 1, 3, 3, 1,	9, 1, 9, 8, 7, 4, 5, 3, 1, 3, 3, 1,
8, 5, 0, 8, 0, 9, 2, 1, 2, 4, 0, 3, 8,	0, 1, 2, 5, 6, 6, 6, 8, 7, 7, 4, 2,	0, 1, 2, 5, 6, 6, 6, 8, 7, 7, 4, 2,
0, 9, 9, 2, 3, 0, 7, 9, 3, 7, 7, 6, 0,		5, 7, 1, 7, 2, 1, 2, 7, 8, 0, 1, 3,
4, 1, 3, 6, 9, 0, 5, 5, 8, 2, 0, 5, 1,		8, 8, 4, 9, 1, 7, 8, 5, 0, 8, 0, 9,
5, 3, 6, 9, 4, 8, 2, 6, 5, 1, 1};		
LLNode* head =	2, 1, 2, 4, 0, 3, 8, 0, 9, 9, 2, 3, 0, 7, 9, 3, 7, 7, 6, 0, 4, 1, 3, 6,	2, 1, 2, 4, 0, 3, 8, 0, 9, 9, 2, 3, 0, 7, 9, 3, 7, 7, 6, 0, 4, 1, 3, 6,
LLNode::createWithIterators(arr, arr +	9, 0, 5, 5, 8, 2, 0, 5, 1, 5, 3, 6,	9, 0, 5, 5, 8, 2, 0, 5, 1, 5, 3, 6,
sizeof(arr) / sizeof(int));	9, 4, 8, 2, 6, 5, 1, 1]	9, 4, 8, 2, 6, 5, 1, 1]
LLNode::printList(head);	[8, 9, 0, 6, 9, 5, 9, 9, 9, 0, 6, 9,	[8, 9, 0, 6, 9, 5, 9, 9, 9, 0, 6, 9]
cout << "\n";	0, 8, 9, 9, 0, 9, 4, 9, 0, 6, 6, 9,	
LLNode* newhead =	9, 0, 7, 6, 5, 6, 7, 8, 3, 4, 4, 4,	0, 8, 9, 9, 0, 9, 4, 9, 0, 6, 6, 9, 9, 0, 7, 6, 5, 6, 7, 8, 3, 4, 4, 4,
replaceFirstGreater(head);		
LLNode::printList(newhead);	8, 9, 6, 6, 8, 9, 2, 4, 4, 7, 8, 5, 4, 5, 7, 7, 7, 8, 8, 8, 6, 6, 6,	8, 9, 6, 6, 8, 9, 2, 4, 4, 7, 8, 5, 4, 5, 7, 7, 7, 8, 8, 8, 6, 6, 6,
Linoueprinttist(newnead),		
	6, 8, 9, 9, 9, 9, 0, 8, 9, 6, 9,	6, 8, 9, 9, 9, 9, 0, 8, 9, 6, 9,
	6, 6, 9, 9, 9, 0, 8, 8, 9, 9, 0, 0,	6, 6, 9, 9, 9, 0, 8, 8, 9, 9, 0, 0,
	4, 7, 9, 9, 5, 5, 7, 9, 9, 9, 0, 5,	4, 7, 9, 9, 5, 5, 7, 9, 9, 9, 0, 5,
	7, 1, 4, 5, 5, 5, 7, 7, 8, 8, 8, 9,	7, 1, 4, 5, 5, 5, 7, 7, 8, 8, 8, 9,
	9, 7, 9, 9, 6, 5, 5, 6, 6, 6, 6, 6, 6,	9, 7, 9, 9, 6, 5, 5, 6, 6, 6, 6, 6, 6,
	9, 5, 9, 3, 5, 5, 9, 0, 0, 6, 8, 6,	9, 5, 9, 3, 5, 5, 9, 0, 0, 6, 8, 6,
	8, 9, 8, 4, 8, 8, 9, 3, 5, 3, 5, 7,	8, 9, 8, 4, 8, 8, 9, 3, 5, 3, 5, 7,
	7, 7, 7, 8, 8, 9, 8, 9, 9, 9, 0, 0,	7, 7, 7, 8, 8, 9, 8, 9, 9, 9, 0, 0,
	6, 9, 9, 0, 8, 2, 8, 9, 0, 8, 9, 7,	6, 9, 9, 0, 8, 2, 8, 9, 0, 8, 9, 7,
	9, 0, 4, 9, 0, 6, 8, 9, 8, 9, 7, 5,	9, 0, 4, 9, 0, 6, 8, 9, 8, 9, 7, 5,
	5, 5, 5, 7, 2, 7, 9, 6, 6, 9, 0, 0,	5, 5, 5, 7, 2, 7, 9, 6, 6, 9, 0, 0,
	0, 6, 9, 4, 9, 9, 9, 0, 0, 9, 9, 0,	0, 6, 9, 4, 9, 9, 9, 0, 0, 9, 9, 0,
	8, 9, 7, 8, 8, 9, 8, 7, 8, 8, 8, 9,	8, 9, 7, 8, 8, 9, 8, 7, 8, 8, 8, 9,
	8, 9, 8, 9, 5, 6, 7, 8, 5, 8, 3, 8,	8, 9, 8, 9, 5, 6, 7, 8, 5, 8, 3, 8,
	9, 0, 4, 4, 7, 7, 7, 9, 4, 4, 6, 9,	9, 0, 4, 4, 7, 7, 7, 9, 4, 4, 6, 9,
	1, 4, 4, 9, 0, 9, 9, 0, 8, 9, 6, 8,	1, 4, 4, 9, 0, 9, 9, 0, 8, 9, 6, 8,
	5, 6, 6, 6, 6, 5, 6, 8, 8, 9, 8, 9,	5, 6, 6, 6, 6, 5, 6, 8, 8, 9, 8, 9,
	7, 8, 9, 7, 8, 6, 6, 6, 8, 8, 8, 6,	7, 8, 9, 7, 8, 6, 6, 6, 8, 8, 8, 6,
	8, 8, 9, 7, 9, 9, 0, 9, 0, 9, 4, 4,	8, 8, 9, 7, 9, 9, 0, 9, 0, 9, 4, 4,
	9, 0, 6, 7, 6, 7, 7, 9, 7, 5, 6, 6,	9, 0, 6, 7, 6, 7, 7, 9, 7, 5, 6, 6,
	7, 3, 6, 6, 3, 3, 6, 7, 9, 7, 9, 9,	7, 3, 6, 6, 3, 3, 6, 7, 9, 7, 9, 9,

Test	Expected	Got
	8, 6, 8, 8, 8, 8, 9, 7, 8, 5, 7, 8,	8, 6, 8, 8, 8, 8, 9, 7, 8, 5, 7, 8,
	5, 7, 8, 3, 5, 8, 9, 9, 4, 8, 9, 8,	5, 7, 8, 3, 5, 8, 9, 9, 4, 8, 9, 8,
	9, 6, 9, 2, 2, 2, 9, 1, 9, 0, 0, 8, 8, 8, 9, 6, 8, 5, 6, 8, 9, 8, 8, 5,	9, 6, 9, 2, 2, 2, 9, 1, 9, 0, 0, 8, 8, 8, 9, 6, 8, 5, 6, 8, 9, 8, 8, 5,
	8, 8, 8, 8, 9, 9, 5, 6, 7, 7, 9, 6,	8, 8, 8, 8, 9, 9, 5, 6, 7, 7, 9, 6,
	9, 9, 0, 4, 4, 9, 0, 8, 9, 3, 8, 9,	9, 9, 0, 4, 4, 9, 0, 8, 9, 3, 8, 9,
	5, 5, 6, 9, 4, 4, 9, 0, 9, 8, 9, 9,	5, 5, 6, 9, 4, 4, 9, 0, 9, 8, 9, 9,
	0, 9, 0, 9, 8, 5, 6, 5, 3, 5, 5, 2,	0, 9, 0, 9, 8, 5, 6, 5, 3, 5, 5, 2,
	1, 2, 5, 6, 8, 8, 8, 9, 8, 8, 5, 5,	1, 2, 5, 6, 8, 8, 8, 9, 8, 8, 5, 5,
	7, 8, 7, 8, 7, 2, 7, 8, 9, 1, 3, 8,	7, 8, 7, 8, 7, 2, 7, 8, 9, 1, 3, 8,
	9, 9, 9, 0, 7, 8, 9, 8, 8, 9, 9, 0, 4, 2, 4, 8, 3, 8, 9, 9, 0, 0, 3, 7,	9, 9, 9, 0, 7, 8, 9, 8, 8, 9, 9, 0, 4, 2, 4, 8, 3, 8, 9, 9, 0, 0, 3, 7,
	7, 9, 0, 7, 9, 9, 9, 4, 6, 3, 6, 9,	7, 9, 0, 7, 9, 9, 9, 4, 6, 3, 6, 9,
	0, 5, 8, 8, 9, 5, 5, 6, 5, 6, 6, 9,	0, 5, 8, 8, 9, 5, 5, 6, 5, 6, 6, 9,
	0, 8, 0, 6, 0, 0, 0, 0]	0, 8, 0, 6, 0, 0, 0, 0]
int arr[] = {0, 0, 3, 2, 5, 9, 4, 9,	[0, 0, 3, 2, 5, 9, 4, 9, 5, 0, 2, 2,	[0, 0, 3, 2, 5, 9, 4, 9, 5, 0, 2, 2,
5, 0, 2, 2, 0, 5, 4, 9, 9, 4, 8, 6, 6,	0, 5, 4, 9, 9, 4, 8, 6, 6, 1, 7, 4,	0, 5, 4, 9, 9, 4, 8, 6, 6, 1, 7, 4,
1, 7, 4, 9, 0, 6, 9, 5, 1, 6, 5, 1, 0,	9, 0, 6, 9, 5, 1, 6, 5, 1, 0, 2, 4,	9, 0, 6, 9, 5, 1, 6, 5, 1, 0, 2, 4,
2, 4, 3, 2, 1, 0, 4, 8, 8, 6, 3, 1, 5,		3, 2, 1, 0, 4, 8, 8, 6, 3, 1, 5, 7,
7, 7, 2, 2, 0, 7, 6, 3, 9, 9, 5, 4, 5,	7, 2, 2, 0, 7, 6, 3, 9, 9, 5, 4, 5,	7, 2, 2, 0, 7, 6, 3, 9, 9, 5, 4, 5,
4, 7, 5, 1, 5, 7, 0, 4, 8, 4, 0, 6, 5, 8, 9, 6, 9, 6, 2, 8, 5, 1, 4, 5, 5, 2,	4, 7, 5, 1, 5, 7, 0, 4, 8, 4, 0, 6, 5, 8, 9, 6, 9, 6, 2, 8, 5, 1, 4, 5,	4, 7, 5, 1, 5, 7, 0, 4, 8, 4, 0, 6, 5, 8, 9, 6, 9, 6, 2, 8, 5, 1, 4, 5,
7, 2, 8, 7, 6, 6, 0, 9, 6, 2, 5, 1, 3,		5, 2, 7, 2, 8, 7, 6, 6, 0, 9, 6, 2,
7, 7, 4, 4, 6, 3, 8, 5, 4, 9, 5, 5, 3,		5, 1, 3, 7, 7, 4, 4, 6, 3, 8, 5, 4,
3, 0, 6, 1, 0, 4, 4, 5, 1, 2, 0, 0, 4,		9, 5, 5, 3, 3, 0, 6, 1, 0, 4, 4, 5,
4, 3, 5, 2, 5, 5, 1, 9, 5, 9, 4, 0, 8,		1, 2, 0, 0, 4, 4, 3, 5, 2, 5, 5, 1,
7, 5, 3, 4, 0, 3, 2, 5, 1, 9, 9, 5, 4,		9, 5, 9, 4, 0, 8, 7, 5, 3, 4, 0, 3,
0, 9, 0, 1, 4, 7, 2, 0, 4, 5, 5, 2, 6, 7, 2, 8, 2, 5, 3, 9, 1, 6, 9, 5, 7, 6,		2, 5, 1, 9, 9, 5, 4, 0, 9, 0, 1, 4, 7, 2, 0, 4, 5, 5, 2, 6, 7, 2, 8, 2,
1, 4, 5, 4, 9, 4, 9, 6, 1, 0, 3, 6, 6,		5, 3, 9, 1, 6, 9, 5, 7, 6, 1, 4, 5,
7, 7, 5, 0, 8, 4, 1, 6, 1, 9, 5, 8, 6,	4, 9, 4, 9, 6, 1, 0, 3, 6, 6, 7, 7,	4, 9, 4, 9, 6, 1, 0, 3, 6, 6, 7, 7,
3, 9, 6, 6, 8, 0, 5, 1, 3, 7, 4, 8, 3,	5, 0, 8, 4, 1, 6, 1, 9, 5, 8, 6, 3,	5, 0, 8, 4, 1, 6, 1, 9, 5, 8, 6, 3,
7, 8, 7, 9, 5, 9, 6, 0, 2, 3, 2, 8, 6,	9, 6, 6, 8, 0, 5, 1, 3, 7, 4, 8, 3,	9, 6, 6, 8, 0, 5, 1, 3, 7, 4, 8, 3,
1, 6, 1, 1, 9, 7, 3, 1, 4, 2, 7, 3, 9,		7, 8, 7, 9, 5, 9, 6, 0, 2, 3, 2, 8,
1, 1, 4, 9, 4, 8, 6, 2, 5, 8, 7, 2, 2, 0, 1, 7, 2, 3, 3, 9, 5, 0, 8, 1, 6, 7,		6, 1, 6, 1, 1, 9, 7, 3, 1, 4, 2, 7, 3, 9, 1, 1, 4, 9, 4, 8, 6, 2, 5, 8,
5, 5, 7, 3, 2, 9, 2, 3, 4, 7, 8, 4, 7,		7, 2, 2, 0, 1, 7, 2, 3, 3, 9, 5, 0,
8, 6, 8, 4, 5, 3, 3, 0, 8, 0, 2, 9, 3,	8, 1, 6, 7, 5, 5, 7, 3, 2, 9, 2, 3,	8, 1, 6, 7, 5, 5, 7, 3, 2, 9, 2, 3,
9, 9, 2, 7, 4, 0, 0, 5, 1, 3, 6, 0, 8,	4, 7, 8, 4, 7, 8, 6, 8, 4, 5, 3, 3,	4, 7, 8, 4, 7, 8, 6, 8, 4, 5, 3, 3,
8, 9, 5, 7, 6, 3, 8, 8, 8, 8, 2, 1, 5,	0, 8, 0, 2, 9, 3, 9, 9, 2, 7, 4, 0,	0, 8, 0, 2, 9, 3, 9, 9, 2, 7, 4, 0,
4, 0, 4, 6, 9, 2, 0, 2, 8, 3, 2, 0, 1, 1, 0, 7, 6, 3, 9, 7, 8, 9, 7, 7, 3, 2,		0, 5, 1, 3, 6, 0, 8, 8, 9, 5, 7, 6, 3, 8, 8, 8, 8, 2, 1, 5, 4, 0, 4, 6,
7, 9, 8, 9, 0, 5, 1, 4, 0, 2, 8, 1, 7,	3, 8, 8, 8, 8, 2, 1, 5, 4, 0, 4, 6, 9, 2, 0, 2, 8, 3, 2, 0, 1, 1, 0, 7,	9, 2, 0, 2, 8, 3, 2, 0, 1, 1, 0, 7,
0, 3, 0, 5, 4, 2, 4, 8, 7, 0, 3, 3, 1,	6, 3, 9, 7, 8, 9, 7, 7, 3, 2, 7, 9,	6, 3, 9, 7, 8, 9, 7, 7, 3, 2, 7, 9,
0, 3, 5, 1, 9, 1, 1, 7, 5, 6, 4, 0, 8,		8, 9, 0, 5, 1, 4, 0, 2, 8, 1, 7, 0,
5, 4, 5, 1, 2, 4, 3, 6, 1, 4, 0, 2, 6,		3, 0, 5, 4, 2, 4, 8, 7, 0, 3, 3, 1,
3, 7, 9, 7, 2, 6, 9, 1, 6, 4, 9, 2, 1,	0, 3, 5, 1, 9, 1, 1, 7, 5, 6, 4, 0,	0, 3, 5, 1, 9, 1, 1, 7, 5, 6, 4, 0,
4, 4, 5, 5, 0, 6, 2, 2, 6, 0, 5, 2, 1, 2, 2, 9, 0, 1, 8, 3, 0, 5, 5, 5, 2, 3,	8, 5, 4, 5, 1, 2, 4, 3, 6, 1, 4, 0, 2, 6, 3, 7, 9, 7, 2, 6, 9, 1, 6, 4,	8, 5, 4, 5, 1, 2, 4, 3, 6, 1, 4, 0, 2, 6, 3, 7, 9, 7, 2, 6, 9, 1, 6, 4,
6, 4, 7, 4, 8, 7, 0, 8, 2, 5, 1, 1, 7,	9, 2, 1, 4, 4, 5, 5, 0, 6, 2, 2, 6,	9, 2, 1, 4, 4, 5, 5, 0, 6, 2, 2, 6,
3, 4, 8, 2, 9, 1, 4, 0, 3, 9, 1, 0, 3,		0, 5, 2, 1, 2, 2, 9, 0, 1, 8, 3, 0,
2, 4, 1, 2, 0, 4, 1, 1, 0, 0, 1, 4, 5,		5, 5, 5, 2, 3, 6, 4, 7, 4, 8, 7, 0,
7, 3, 9, 4, 0, 5, 7, 3, 5, 1, 7, 5, 5,	8, 2, 5, 1, 1, 7, 3, 4, 8, 2, 9, 1,	8, 2, 5, 1, 1, 7, 3, 4, 8, 2, 9, 1,
6, 8, 9, 7, 3, 8, 1, 3, 6, 4, 6, 6, 9,	4, 0, 3, 9, 1, 0, 3, 2, 4, 1, 2, 0,	4, 0, 3, 9, 1, 0, 3, 2, 4, 1, 2, 0,
3, 5, 4, 3, 5, 8, 3, 0, 9, 7, 5, 1, 4, 9, 2, 6, 0, 3, 4, 4, 2, 4, 2, 6, 6, 8,	4, 1, 1, 0, 0, 1, 4, 5, 7, 3, 9, 4, 0, 5, 7, 3, 5, 1, 7, 5, 5, 6, 8, 9,	4, 1, 1, 0, 0, 1, 4, 5, 7, 3, 9, 4,       0, 5, 7, 3, 5, 1, 7, 5, 5, 6, 8, 9,
1, 7, 2, 4, 2, 3, 6, 8, 1, 0, 8, 4, 5,	7, 3, 8, 1, 3, 6, 4, 6, 6, 9, 3, 5,	7, 3, 8, 1, 3, 6, 4, 6, 6, 9, 3, 5,
8, 6, 2, 3, 5, 8, 7, 1, 1, 4, 8, 6, 2,	4, 3, 5, 8, 3, 0, 9, 7, 5, 1, 4, 9,	4, 3, 5, 8, 3, 0, 9, 7, 5, 1, 4, 9,
9, 5, 6, 9, 2, 2, 9, 6, 8, 3, 1, 3, 8,	2, 6, 0, 3, 4, 4, 2, 4, 2, 6, 6, 8,	2, 6, 0, 3, 4, 4, 2, 4, 2, 6, 6, 8,
4, 8, 0, 0, 9, 1, 2, 6, 5, 6, 1, 1, 5,	1, 7, 2, 4, 2, 3, 6, 8, 1, 0, 8, 4,	1, 7, 2, 4, 2, 3, 6, 8, 1, 0, 8, 4,
5, 0, 2, 5, 3, 9, 3, 0, 1, 1, 2, 1, 4,		5, 8, 6, 2, 3, 5, 8, 7, 1, 1, 4, 8,
4, 2, 3, 6, 1, 9, 2, 6, 3, 2, 9, 2, 1, 0, 5, 9, 4, 3, 7, 9, 7, 4, 4, 2, 8, 0,	6, 2, 9, 5, 6, 9, 2, 2, 9, 6, 8, 3,	6, 2, 9, 5, 6, 9, 2, 2, 9, 6, 8, 3,
	1, 3, 8, 4, 8, 0, 0, 9, 1, 2, 6, 5,	1, 3, 8, 4, 8, 0, 0, 9, 1, 2, 6, 5,
1, 8, 7, 2, 1, 2, 2, 7, 3, 5, 7, 2, 6,		6, 1, 1, 5, 5, 0, 2, 5, 3, 9, 3, 0,

Test	Expected	Got
3, 9, 7, 1, 4, 2, 1, 3, 0, 6, 5, 0, 6,	6, 3, 2, 9, 2, 1, 0, 5, 9, 4, 3, 7,	6, 3, 2, 9, 2, 1, 0, 5, 9, 4, 3, 7,
2, 1, 9, 3, 5, 4, 7, 8, 6, 5, 6, 4, 7,	9, 7, 4, 4, 2, 8, 0, 1, 8, 7, 2, 1,	9, 7, 4, 4, 2, 8, 0, 1, 8, 7, 2, 1,
2, 1, 5, 2, 0, 6, 3, 7, 6, 6, 5, 3, 8,	2, 2, 7, 3, 5, 7, 2, 6, 8, 3, 3, 3,	2, 2, 7, 3, 5, 7, 2, 6, 8, 3, 3, 3,
5, 2, 3, 1, 3, 3, 9, 1, 5, 2, 6, 4, 5,	1, 5, 9, 8, 9, 1, 0, 4, 3, 3, 9, 7,	1, 5, 9, 8, 9, 1, 0, 4, 3, 3, 9, 7,
6, 5, 5, 9, 9, 3, 5, 0, 8, 7, 3, 0, 4, 2, 5, 5, 9, 1, 2, 0, 7, 2, 6, 2, 7	1, 4, 2, 1, 3, 0, 6, 5, 0, 6, 2, 1,	1, 4, 2, 1, 3, 0, 6, 5, 0, 6, 2, 1,
3, 5, 5, 9, 1, 3, 0, 9, 7, 3, 6, 3, 7, 8, 8, 1, 9, 1, 1, 0, 9, 0, 9, 7, 3, 1,	9, 3, 5, 4, 7, 8, 6, 5, 6, 4, 7, 2, 1, 5, 2, 0, 6, 3, 7, 6, 6, 5, 3, 8,	9, 3, 5, 4, 7, 8, 6, 5, 6, 4, 7, 2, 1, 5, 2, 0, 6, 3, 7, 6, 6, 5, 3, 8,
0, 0, 2, 2, 2, 2, 9, 3, 6, 6, 7, 6, 8,	5, 2, 3, 1, 3, 3, 9, 1, 5, 2, 6, 4,	5, 2, 3, 1, 3, 3, 9, 1, 5, 2, 6, 4,
2, 1, 9, 0, 9, 2, 6, 3, 3, 4, 5, 5, 5,	5, 6, 5, 5, 9, 9, 3, 5, 0, 8, 7, 3,	5, 6, 5, 5, 9, 9, 3, 5, 0, 8, 7, 3,
0, 0, 6, 6, 8, 3, 4, 7, 7, 4, 2, 3, 4,	0, 4, 3, 5, 5, 9, 1, 3, 0, 9, 7, 3,	0, 4, 3, 5, 5, 9, 1, 3, 0, 9, 7, 3,
5, 2, 7, 3, 1, 1, 4, 3, 6, 6, 6, 6, 5,	6, 3, 7, 8, 8, 1, 9, 1, 1, 0, 9, 0,	6, 3, 7, 8, 8, 1, 9, 1, 1, 0, 9, 0,
0, 6, 5, 4, 3, 8, 0, 0, 3, 7, 2, 0, 0,	9, 7, 3, 1, 0, 0, 2, 2, 2, 2, 9, 3,	9, 7, 3, 1, 0, 0, 2, 2, 2, 2, 9, 3,
1, 0, 9, 5, 2, 8, 5, 6, 2, 7, 3, 3, 7,	6, 6, 7, 6, 8, 2, 1, 9, 0, 9, 2, 6,	6, 6, 7, 6, 8, 2, 1, 9, 0, 9, 2, 6,
3, 9, 1, 6, 7, 6, 6, 0, 0, 5, 4, 1, 9,	3, 3, 4, 5, 5, 5, 0, 0, 6, 6, 8, 3,	3, 3, 4, 5, 5, 5, 0, 0, 6, 6, 8, 3,
2, 9, 3, 8, 7, 4, 3, 5, 5, 0, 4, 8, 7,	4, 7, 7, 4, 2, 3, 4, 5, 2, 7, 3, 1,	4, 7, 7, 4, 2, 3, 4, 5, 2, 7, 3, 1,
9, 5, 3, 0, 7, 4, 8, 8, 8, 8, 1, 0, 9, 2, 4, 5, 5, 6, 9, 2, 6, 0, 9, 4, 1, 4,	1, 4, 3, 6, 6, 6, 6, 5, 0, 6, 5, 4, 3, 8, 0, 0, 3, 7, 2, 0, 0, 4, 0, 9,	1, 4, 3, 6, 6, 6, 6, 5, 0, 6, 5, 4, 3, 8, 0, 0, 3, 7, 2, 0, 0, 4, 0, 9,
1, 0, 9, 4, 8, 1, 7, 8, 7, 9, 8, 8, 3,	5, 2, 8, 5, 6, 2, 7, 3, 3, 7, 8, 9,	5, 2, 8, 5, 6, 2, 7, 3, 3, 7, 8, 9,
0, 2, 7, 0, 1, 1, 5, 5, 8, 0, 2, 4, 3,	1, 6, 7, 6, 6, 0, 0, 5, 4, 1, 9, 2,	1, 6, 7, 6, 6, 0, 0, 5, 4, 1, 9, 2,
1, 1, 8, 5, 6, 7, 3, 6, 6, 2, 5, 6, 1,	9, 3, 8, 7, 4, 3, 5, 5, 0, 4, 8, 7,	9, 3, 8, 7, 4, 3, 5, 5, 0, 4, 8, 7,
, 2, 4, 5, 9, 4, 0, 1, 9, 4, 9, 1, 7,	9, 5, 3, 0, 7, 4, 8, 8, 8, 8, 1, 0,	9, 5, 3, 0, 7, 4, 8, 8, 8, 8, 1, 0,
1, 0, 3, 4, 8, 1, 1, 3, 0, 3, 1, 7, 0,	9, 2, 4, 5, 5, 6, 9, 2, 6, 0, 9, 4,	9, 2, 4, 5, 5, 6, 9, 2, 6, 0, 9, 4,
2, 6, 2, 9, 1, 6, 9, 7, 7, 0, 8, 4, 0,	1, 4, 4, 0, 9, 4, 8, 1, 7, 8, 7, 9,	1, 4, 4, 0, 9, 4, 8, 1, 7, 8, 7, 9,
8, 4, 3, 8, 0, 3, 4, 2, 9, 9, 8, 8, 5,	8, 8, 3, 9, 2, 7, 0, 1, 1, 5, 5, 8,	8, 8, 3, 9, 2, 7, 0, 1, 1, 5, 5, 8,
3, 7, 4, 6, 2, 2, 7, 9, 2, 7, 8, 7, 7,	0, 2, 4, 3, 4, 1, 8, 5, 6, 7, 3, 6,	0, 2, 4, 3, 4, 1, 8, 5, 6, 7, 3, 6,
1, 1, 0, 0, 3, 8, 4, 8, 6, 0, 7, 8, 7,	6, 2, 5, 6, 1, 4, 2, 4, 5, 9, 4, 0,	6, 2, 5, 6, 1, 4, 2, 4, 5, 9, 4, 0,
1, 2, 7, 4, 3, 1, 7, 2, 6, 6, 4, 9, 1,	1, 9, 4, 9, 1, 7, 4, 0, 3, 4, 8, 1,	1, 9, 4, 9, 1, 7, 4, 0, 3, 4, 8, 1,
0, 6, 4, 5, 7, 6, 8, 8, 6};	1, 3, 0, 3, 1, 7, 0, 2, 6, 2, 9, 1,	1, 3, 0, 3, 1, 7, 0, 2, 6, 2, 9, 1,
<pre>.LNode* head = .LNode::createWithIterators(arr, arr +</pre>	6, 9, 7, 7, 0, 8, 4, 0, 8, 4, 3, 8,	6, 9, 7, 7, 0, 8, 4, 0, 8, 4, 3, 8,
sizeof(arr) / sizeof(int));	0, 3, 4, 2, 9, 9, 8, 8, 5, 8, 7, 4, 6, 2, 2, 7, 9, 2, 7, 8, 7, 7, 4, 1,	0, 3, 4, 2, 9, 9, 8, 8, 5, 8, 7, 4, 6, 2, 2, 7, 9, 2, 7, 8, 7, 7, 4, 1,
LNode::printList(head);	0, 0, 3, 8, 4, 8, 6, 0, 7, 8, 7, 4,	0, 0, 3, 8, 4, 8, 6, 0, 7, 8, 7, 4,
cout << "\n";	2, 7, 4, 3, 1, 7, 2, 6, 6, 4, 9, 1,	2, 7, 4, 3, 1, 7, 2, 6, 6, 4, 9, 1,
.LNode* newhead =	0, 6, 4, 5, 7, 6, 8, 8, 6]	0, 6, 4, 5, 7, 6, 8, 8, 6]
replaceFirstGreater(head);	[3, 3, 5, 5, 9, 0, 9, 0, 9, 2, 5, 5,	[3, 3, 5, 5, 9, 0, 9, 0, 9, 2, 5, 5,
<pre>LNode::printList(newhead);</pre>	5, 9, 9, 0, 0, 8, 9, 7, 7, 7, 9, 9,	5, 9, 9, 0, 0, 8, 9, 7, 7, 7, 9, 9,
	0, 6, 9, 0, 6, 6, 8, 8, 2, 2, 4, 8,	0, 6, 9, 0, 6, 6, 8, 8, 2, 2, 4, 8,
	4, 4, 4, 4, 8, 9, 9, 7, 5, 5, 7, 9,	4, 4, 4, 4, 8, 9, 9, 7, 5, 5, 7, 9,
	9, 7, 7, 7, 9, 9, 9, 0, 0, 7, 5, 7,	9, 7, 7, 7, 9, 9, 9, 0, 0, 7, 5, 7,
	7, 8, 7, 5, 7, 8, 4, 8, 9, 6, 6, 8, 8, 9, 0, 9, 0, 8, 8, 9, 7, 4, 5, 7,	7, 8, 7, 5, 7, 8, 4, 8, 9, 6, 6, 8, 8, 9, 0, 9, 0, 8, 8, 9, 7, 4, 5, 7,
	7, 7, 8, 8, 9, 9, 9, 9, 9, 0, 7, 5,	7, 7, 8, 8, 9, 9, 9, 9, 9, 0, 7, 5,
	7, 3, 7, 8, 8, 6, 6, 8, 8, 9, 9, 9,	7, 3, 7, 8, 8, 6, 6, 8, 8, 9, 9, 9,
	0, 6, 6, 6, 6, 9, 4, 4, 5, 5, 9,	0, 6, 6, 6, 6, 6, 9, 4, 4, 5, 5, 9,
	2, 4, 4, 4, 5, 5, 5, 9, 5, 9, 9, 9,	2, 4, 4, 4, 5, 5, 5, 9, 5, 9, 9, 9,
	0, 9, 0, 8, 8, 9, 9, 9, 4, 5, 3, 5,	0, 9, 0, 8, 8, 9, 9, 9, 4, 5, 3, 5,
	5, 9, 9, 0, 0, 9, 9, 9, 0, 1, 4, 7,	5, 9, 9, 0, 0, 9, 9, 9, 0, 1, 4, 7,
	8, 4, 4, 5, 6, 6, 6, 7, 8, 8, 9, 5,	8, 4, 4, 5, 6, 6, 6, 7, 8, 8, 9, 5,
	9, 9, 0, 6, 9, 0, 7, 9, 9, 4, 5, 9,	9, 9, 0, 6, 9, 0, 7, 9, 9, 4, 5, 9,
	9, 0, 9, 0, 7, 3, 3, 6, 7, 7, 8, 8,	9, 0, 9, 0, 7, 3, 3, 6, 7, 7, 8, 8,
	8, 8, 9, 6, 6, 9, 9, 0, 8, 9, 9, 9,	8, 8, 9, 6, 6, 9, 9, 0, 8, 9, 9, 9,
	0, 8, 8, 9, 5, 7, 3, 7, 8, 8, 9, 7, 8, 9, 9, 0, 9, 0, 8, 2, 3, 8, 8, 9,	0, 8, 8, 9, 5, 7, 3, 7, 8, 8, 9, 7, 8, 9, 9, 0, 9, 0, 8, 2, 3, 8, 8, 9,
	9, 6, 9, 9, 9, 0, 9, 4, 4, 7, 7, 9,	9, 6, 9, 9, 9, 0, 9, 4, 4, 7, 7, 9,
	9, 0, 4, 4, 9, 0, 8, 9, 8, 5, 8, 9,	9, 0, 4, 4, 9, 0, 8, 9, 8, 5, 8, 9,
	9, 7, 7, 1, 7, 9, 3, 9, 9, 0, 8, 8,	9, 7, 7, 1, 7, 9, 3, 9, 9, 0, 8, 8,
	9, 6, 7, 9, 7, 7, 9, 9, 9, 0, 3, 4,	9, 6, 7, 9, 7, 7, 9, 9, 9, 0, 3, 4,
	7, 8, 9, 7, 8, 9, 8, 9, 5, 8, 8, 8,	7, 8, 9, 7, 8, 9, 8, 9, 5, 8, 8, 8,
	8, 9, 2, 9, 0, 9, 0, 0, 7, 8, 5, 5,	8, 9, 2, 9, 0, 9, 0, 0, 7, 8, 5, 5,
	5, 6, 3, 6, 8, 8, 9, 9, 0, 7, 8, 8,	5, 6, 3, 6, 8, 8, 9, 9, 0, 7, 8, 8,
	8, 9, 9, 9, 9, 5, 5, 6, 6, 4, 6, 9,	8, 9, 9, 9, 5, 5, 6, 6, 4, 6, 9,
	8, 9, 9, 9, 9, 5, 5, 6, 6, 4, 6, 9, 0, 8, 2, 8, 9, 7, 7, 1, 7, 7, 7, 9,	0, 8, 2, 8, 9, 7, 7, 1, 7, 7, 7, 9,
	8, 9, 9, 9, 9, 5, 5, 6, 6, 4, 6, 9, 0, 8, 2, 8, 9, 7, 7, 1, 7, 7, 7, 9, 9, 9, 0, 8, 9, 0, 9, 9, 7, 7, 9, 0,	0, 8, 2, 8, 9, 7, 7, 1, 7, 7, 7, 9, 9, 9, 0, 8, 9, 0, 9, 9, 7, 7, 9, 0,
	8, 9, 9, 9, 9, 5, 5, 6, 6, 4, 6, 9, 0, 8, 2, 8, 9, 7, 7, 1, 7, 7, 7, 9,	0, 8, 2, 8, 9, 7, 7, 1, 7, 7, 7, 9,

	Test	Expected	Got
		3, 5, 9, 9, 0, 7, 7, 8, 6, 8, 8, 8, 9, 6, 5, 6, 2, 4, 6, 6, 7, 4, 6, 2,	3, 5, 9, 9, 0, 7, 7, 8, 6, 8, 8, 8, 9, 6, 5, 6, 2, 4, 6, 6, 7, 4, 6, 2,
		6, 7, 7, 9, 0, 9, 6, 9, 0, 6, 9, 9,	6, 7, 7, 9, 0, 9, 6, 9, 0, 6, 9, 9,
		0, 4, 4, 5, 5, 6, 6, 6, 9, 6, 6, 9,	0, 4, 4, 5, 5, 6, 6, 6, 9, 6, 6, 9,
		5, 9, 9, 2, 9, 9, 0, 1, 8, 9, 5, 5,	5, 9, 9, 2, 9, 9, 0, 1, 8, 9, 5, 5,
		6, 6, 6, 3, 6, 7, 7, 8, 8, 9, 8, 8, 9, 5, 7, 7, 7, 8, 4, 8, 9, 9, 0, 4,	6, 6, 6, 3, 6, 7, 7, 8, 8, 9, 8, 8, 9, 5, 7, 7, 8, 4, 8, 9, 9, 0, 4,
		9, 3, 9, 0, 3, 3, 4, 4, 5, 2, 4, 4,	9, 3, 9, 0, 3, 3, 4, 4, 5, 2, 4, 4,
		5, 4, 4, 1, 1, 4, 5, 7, 9, 9, 0, 5,	5, 4, 4, 1, 1, 4, 5, 7, 9, 9, 0, 5,
		5, 7, 8, 5, 7, 7, 8, 6, 6, 8, 9, 0,	5, 7, 8, 5, 7, 7, 8, 6, 6, 8, 9, 0, 8, 8, 9, 3, 6, 9, 6, 9, 9, 0, 5, 8,
		8, 8, 9, 3, 6, 9, 6, 9, 9, 0, 5, 8, 5, 5, 8, 9, 9, 0, 9, 9, 4, 9, 0,	5, 5, 8, 9, 9, 9, 0, 9, 9, 4, 9, 0,
		6, 8, 3, 4, 6, 6, 4, 6, 6, 8, 8, 9,	6, 8, 3, 4, 6, 6, 4, 6, 6, 8, 8, 9,
		7, 8, 4, 6, 3, 6, 8, 9, 8, 8, 9, 5,	7, 8, 4, 6, 3, 6, 8, 9, 8, 8, 9, 5,
		8, 9, 8, 3, 5, 8, 9, 8, 4, 4, 8, 9, 9, 9, 0, 6, 9, 0, 9, 9, 0, 8, 9, 8,	8, 9, 8, 3, 5, 8, 9, 8, 4, 4, 8, 9, 9, 9, 0, 6, 9, 0, 9, 9, 0, 8, 9, 8,
		3, 8, 9, 8, 9, 9, 9, 0, 2, 6, 9, 6,	3, 8, 9, 8, 9, 9, 9, 0, 2, 6, 9, 6,
		9, 5, 5, 9, 9, 2, 5, 9, 9, 0, 4, 1,	9, 5, 5, 9, 9, 2, 5, 9, 9, 0, 4, 1,
		2, 2, 4, 4, 6, 6, 3, 6, 9, 9, 0, 6,	2, 2, 4, 4, 6, 6, 3, 6, 9, 9, 0, 6,
		9, 9, 9, 0, 5, 5, 5, 9, 0, 7, 7, 9, 0, 8, 8, 8, 8, 9, 1, 8, 9, 8, 7, 2,	9, 9, 9, 0, 5, 5, 5, 9, 0, 7, 7, 9, 0, 8, 8, 8, 8, 9, 1, 8, 9, 8, 7, 2,
		7, 7, 8, 5, 7, 8, 6, 8, 9, 5, 5, 5,	7, 7, 8, 5, 7, 8, 6, 8, 9, 5, 5, 5,
		5, 9, 0, 9, 0, 4, 4, 9, 9, 9, 0, 9,	5, 9, 0, 9, 0, 4, 4, 9, 9, 9, 0, 9,
		4, 6, 3, 3, 6, 6, 9, 6, 6, 9, 9, 9,	4, 6, 3, 3, 6, 6, 9, 6, 6, 9, 9, 9,
		0, 5, 7, 7, 8, 9, 7, 6, 7, 7, 8, 5, 5, 6, 6, 6, 6, 7, 7, 8, 8, 8, 8, 8, 9,	0, 5, 7, 7, 8, 9, 7, 6, 7, 7, 8, 5, 5, 6, 6, 6, 7, 7, 8, 8, 8, 8, 8, 9,
		9, 3, 9, 3, 9, 9, 0, 5, 6, 6, 9, 5,	9, 3, 9, 3, 9, 9, 0, 5, 6, 6, 9, 5,
		6, 9, 9, 9, 0, 0, 5, 8, 8, 9, 9, 4,	6, 9, 9, 9, 0, 0, 5, 8, 8, 9, 9, 4,
		4, 5, 5, 9, 9, 0, 3, 9, 9, 0, 8, 6,	4, 5, 5, 9, 9, 0, 3, 9, 9, 0, 8, 6,
		7, 7, 8, 9, 9, 9, 0, 9, 9, 9, 0, 9, 0, 9, 9, 2, 2, 2, 9, 9, 9, 9, 0, 6,	7, 7, 8, 9, 9, 9, 0, 9, 9, 0, 9, 0, 9, 9, 2, 2, 2, 9, 9, 9, 9, 0, 6,
		7, 7, 8, 8, 9, 9, 9, 0, 9, 0, 6, 8,	7, 7, 8, 8, 9, 9, 9, 0, 9, 0, 6, 8,
		4, 4, 5, 6, 6, 6, 6, 8, 8, 9, 4,	4, 4, 5, 6, 6, 6, 6, 8, 8, 9, 4,
		7, 8, 8, 5, 3, 4, 5, 7, 7, 8, 4, 4,	7, 8, 8, 5, 3, 4, 5, 7, 7, 8, 4, 4,
		4, 6, 6, 8, 8, 8, 8, 6, 6, 8, 8, 8,         8, 9, 3, 3, 7, 9, 4, 4, 4, 9, 9, 0,	4, 6, 6, 8, 8, 8, 8, 6, 6, 8, 8, 8,         8, 9, 3, 3, 7, 9, 4, 4, 4, 9, 9, 0,
		8, 8, 9, 6, 7, 7, 8, 7, 7, 8, 9, 0,	8, 8, 9, 6, 7, 7, 8, 7, 7, 8, 9, 0,
		6, 7, 9, 9, 9, 5, 5, 9, 9, 9, 0, 9,	6, 7, 9, 9, 9, 5, 5, 9, 9, 9, 0, 9,
		0, 8, 9, 8, 5, 5, 8, 8, 4, 8, 9, 9, 0, 7, 7, 7, 8, 8, 9, 9, 9, 9, 9, 9, 9,	0, 8, 9, 8, 5, 5, 8, 8, 4, 8, 9, 9, 0, 7, 7, 7, 8, 8, 9, 9, 9, 9, 9, 9, 9,
		0, 4, 5, 6, 6, 9, 0, 6, 9, 9, 0, 9,	0, 4, 5, 6, 6, 9, 0, 6, 9, 9, 0, 9,
		4, 9, 9, 9, 0, 8, 9, 7, 8, 9, 9, 0,	4, 9, 9, 9, 0, 8, 9, 7, 8, 9, 9, 0,
		9, 9, 9, 0, 7, 8, 1, 5, 5, 8, 8, 9,	9, 9, 9, 0, 7, 8, 1, 5, 5, 8, 8, 9,
		2, 4, 8, 4, 8, 8, 9, 6, 7, 9, 6, 9, 9, 5, 6, 9, 4, 5, 4, 5, 9, 0, 9, 1,	2, 4, 8, 4, 8, 8, 9, 6, 7, 9, 6, 9, 9, 5, 6, 9, 4, 5, 4, 5, 9, 0, 9, 1,
		9, 0, 9, 0, 7, 8, 8, 3, 4, 8, 9, 3,	9, 0, 9, 0, 7, 8, 8, 3, 4, 8, 9, 3,
		3, 7, 3, 7, 7, 9, 2, 6, 9, 9, 0, 6,	3, 7, 3, 7, 7, 9, 2, 6, 9, 9, 0, 6,
		9, 0, 8, 8, 8, 9, 8, 8, 9, 8, 8, 9, 3, 4, 9, 9, 0, 0, 9, 9, 8, 9, 9, 6,	9, 0, 8, 8, 8, 9, 8, 8, 9, 8, 8, 9, 3, 4, 9, 9, 0, 0, 9, 9, 8, 9, 9, 6,
		7, 7, 7, 9, 0, 7, 8, 9, 8, 8, 8, 3,	7, 7, 7, 9, 0, 7, 8, 9, 8, 8, 8, 3,
		3, 3, 8, 9, 8, 9, 7, 7, 8, 9, 9, 7,	3, 3, 8, 9, 8, 9, 7, 7, 8, 9, 9, 7,
		7, 9, 7, 7, 7, 9, 6, 9, 9, 9, 0, 6,	7, 9, 7, 7, 9, 6, 9, 9, 9, 0, 6,
		6, 7, 5, 7, 8, 8, 0, 0, 0]	6, 7, 5, 7, 8, 8, 0, 0, 0]
~	int arr[] = {9, 4, 4, 4, 4, 3, 6, 1,	[9, 4, 4, 4, 4, 3, 6, 1, 6, 9, 4, 9,	[9, 4, 4, 4, 4, 3, 6, 1, 6, 9, 4, 9,
	6, 9, 4, 9, 0, 1, 0, 4, 5, 9, 8, 7, 3, 3, 6, 6, 0, 1, 6, 4, 3, 3, 4, 3, 7, 9,	0, 1, 0, 4, 5, 9, 8, 7, 3, 3, 6, 6, 0, 1, 6, 4, 3, 3, 4, 3, 7, 9, 4, 1,	0, 1, 0, 4, 5, 9, 8, 7, 3, 3, 6, 6, 0, 1, 6, 4, 3, 3, 4, 3, 7, 9, 4, 1,
	4, 1, 0, 5, 1, 8, 0, 2, 6, 5, 4, 6, 7,	0, 5, 1, 8, 0, 2, 6, 5, 4, 6, 7, 4,	0, 5, 1, 8, 0, 2, 6, 5, 4, 6, 7, 4,
	4, 4, 5, 3, 2, 0, 6, 1, 6, 6, 3, 7, 9,		4, 5, 3, 2, 0, 6, 1, 6, 6, 3, 7, 9,
	1, 9, 9, 2, 9, 2, 0, 8, 8, 1, 1, 6, 1, 2, 9, 7, 5, 6, 0, 0, 7, 7, 4, 4		1, 9, 9, 2, 9, 2, 0, 8, 8, 1, 1, 6,
	2, 9, 7, 5, 7, 5, 6, 0, 0, 7, 7, 4, 4, 2, 1, 0, 8, 9, 2, 3, 2, 8, 5, 4, 3, 2,		1, 2, 9, 7, 5, 7, 5, 6, 0, 0, 7, 7, 4, 4, 2, 1, 0, 8, 9, 2, 3, 2, 8, 5,
	2, 3, 9, 8, 0, 9, 2, 4, 4, 9, 4, 5, 0,	4, 3, 2, 2, 3, 9, 8, 0, 9, 2, 4, 4,	4, 3, 2, 2, 3, 9, 8, 0, 9, 2, 4, 4,
	4, 3, 3, 2, 3, 1, 7, 8, 4, 3, 9, 0, 9,		9, 4, 5, 0, 4, 3, 3, 2, 3, 1, 7, 8,
	2, 6, 7, 5, 6, 7, 3, 9, 5, 6, 4, 9, 6, 3, 7, 4, 7, 3, 6, 7, 6, 8, 8, 2, 7, 9,		4, 3, 9, 0, 9, 2, 6, 7, 5, 6, 7, 3,         9, 5, 6, 4, 9, 6, 3, 7, 4, 7, 3, 6,
	3, 7, 4, 7, 3, 0, 7, 0, 0, 0, 2, 7, 3,	-, -, -, -, -, 0, 5, 7, 4, 7, 5, 0,	-, -, -, -, -, -, -, -, -, -, -, -, -,

Test	Expected	Got
2, 9, 4, 3, 5, 7, 3, 7, 2, 1, 5, 0, 8,	7, 6, 8, 8, 2, 7, 9, 2, 9, 4, 3, 5,	7, 6, 8, 8, 2, 7, 9, 2, 9, 4, 3, 5,
1, 6, 8, 3, 3, 6, 6, 9, 0, 8, 7, 4, 2,	7, 3, 7, 2, 1, 5, 0, 8, 1, 6, 8, 3,	7, 3, 7, 2, 1, 5, 0, 8, 1, 6, 8, 3,
	3, 6, 6, 9, 0, 8, 7, 4, 2, 2, 5, 6,	3, 6, 6, 9, 0, 8, 7, 4, 2, 2, 5, 6,
	8, 8, 8, 0, 2, 7, 5, 8, 0, 9, 7, 7,	8, 8, 8, 0, 2, 7, 5, 8, 0, 9, 7, 7,
0, 5, 6, 2, 3, 2, 5, 2, 8, 9, 9, 9, 8,	6, 0, 9, 3, 6, 1, 3, 0, 8, 8, 1, 0,	6, 0, 9, 3, 6, 1, 3, 0, 8, 8, 1, 0,
	5, 6, 2, 3, 2, 5, 2, 8, 9, 9, 9, 8,	5, 6, 2, 3, 2, 5, 2, 8, 9, 9, 9, 8,
	0, 2, 8, 6, 7, 1, 9, 8, 4, 1, 6, 4,	0, 2, 8, 6, 7, 1, 9, 8, 4, 1, 6, 4,
6, 8, 6, 8, 6, 7, 5, 5, 4, 6, 2, 9, 1,	2, 8, 1, 4, 7, 4, 3, 1, 2, 9, 1, 3,	2, 8, 1, 4, 7, 4, 3, 1, 2, 9, 1, 3,
0, 0, 9, 2, 8, 6, 2, 4, 6, 4, 6, 0, 8,	9, 2, 6, 8, 6, 8, 6, 7, 5, 5, 4, 6,	9, 2, 6, 8, 6, 8, 6, 7, 5, 5, 4, 6,
6, 1, 3, 3, 3, 9, 3, 9, 5, 4, 9, 1, 1,	2, 9, 1, 0, 0, 9, 2, 8, 6, 2, 4, 6,	2, 9, 1, 0, 0, 9, 2, 8, 6, 2, 4, 6,
8, 7, 9, 0, 1, 7, 2, 1, 2, 1, 4, 1, 5,	4, 6, 0, 8, 6, 1, 3, 3, 3, 9, 3, 9,	4, 6, 0, 8, 6, 1, 3, 3, 3, 9, 3, 9,
2, 0, 0, 8, 2, 5, 8, 4, 7, 1, 9, 1, 9,	5, 4, 9, 1, 1, 8, 7, 9, 0, 1, 7, 2,	5, 4, 9, 1, 1, 8, 7, 9, 0, 1, 7, 2,
1, 3, 8, 3, 2, 3, 3, 8, 9, 4, 3, 4, 4,	1, 2, 1, 4, 1, 5, 2, 0, 0, 8, 2, 5,	1, 2, 1, 4, 1, 5, 2, 0, 0, 8, 2, 5,
5, 5, 1, 7, 8, 7, 6, 1, 2, 4, 6, 3, 0,	8, 4, 7, 1, 9, 1, 9, 1, 3, 8, 3, 2,	8, 4, 7, 1, 9, 1, 9, 1, 3, 8, 3, 2,
	3, 3, 8, 9, 4, 3, 4, 4, 5, 5, 1, 7,	3, 3, 8, 9, 4, 3, 4, 4, 5, 5, 1, 7,
	8, 7, 6, 1, 2, 4, 6, 3, 0, 8, 3, 0,	8, 7, 6, 1, 2, 4, 6, 3, 0, 8, 3, 0,
	4, 2, 3, 7, 7, 0, 4, 4, 4, 4, 3, 9,	4, 2, 3, 7, 7, 0, 4, 4, 4, 4, 3, 9,
	0, 1, 8, 0, 9, 3, 7, 6, 5, 0, 8, 9,	0, 1, 8, 0, 9, 3, 7, 6, 5, 0, 8, 9,
	6, 6, 1, 5, 6, 5, 7, 9, 8, 8, 9, 8,	6, 6, 1, 5, 6, 5, 7, 9, 8, 8, 9, 8,
3, 7, 2, 1, 1, 9, 0, 9, 6, 4, 8, 7, 4,	5, 6, 2, 9, 3, 5, 3, 6, 1, 5, 7, 3,	5, 6, 2, 9, 3, 5, 3, 6, 1, 5, 7, 3,
5, 8, 9, 6, 7, 0, 0, 8, 7, 8, 4, 3, 1,	4, 8, 3, 1, 0, 0, 8, 9, 6, 7, 5, 9,	4, 8, 3, 1, 0, 0, 8, 9, 6, 7, 5, 9,
6, 1, 0, 5, 8, 8, 4, 3, 7, 9, 0, 9, 1,	3, 5, 3, 7, 2, 1, 1, 9, 0, 9, 6, 4,	3, 5, 3, 7, 2, 1, 1, 9, 0, 9, 6, 4,
8, 6, 4, 3, 2, 2, 0, 5, 0, 2, 9, 8, 8,	8, 7, 4, 5, 8, 9, 6, 7, 0, 0, 8, 7,	8, 7, 4, 5, 8, 9, 6, 7, 0, 0, 8, 7,
0, 7, 2, 6, 9, 4, 8, 7, 3, 4, 8, 8, 7,	8, 4, 3, 1, 6, 1, 0, 5, 8, 8, 4, 3,	8, 4, 3, 1, 6, 1, 0, 5, 8, 8, 4, 3,
6, 5, 9, 0, 7, 0, 9, 2, 6, 6, 8, 0, 1,	7, 9, 0, 9, 1, 8, 6, 4, 3, 2, 2, 0,	7, 9, 0, 9, 1, 8, 6, 4, 3, 2, 2, 0,
	5, 0, 2, 9, 8, 8, 0, 7, 2, 6, 9, 4,	5, 0, 2, 9, 8, 8, 0, 7, 2, 6, 9, 4,
	8, 7, 3, 4, 8, 8, 7, 6, 5, 9, 0, 7,	8, 7, 3, 4, 8, 8, 7, 6, 5, 9, 0, 7,
	0, 9, 2, 6, 6, 8, 0, 1, 3, 5, 5, 8,	0, 9, 2, 6, 6, 8, 0, 1, 3, 5, 5, 8,
	3, 3, 9, 1, 1, 7, 1, 9, 8, 2, 6, 2,	3, 3, 9, 1, 1, 7, 1, 9, 8, 2, 6, 2,
	1, 6, 6, 9, 1, 9, 7, 8, 9, 3, 5, 8,	1, 6, 6, 9, 1, 9, 7, 8, 9, 3, 5, 8,
	1, 9, 2, 8, 3, 4, 1, 5, 1, 3, 2, 3,	1, 9, 2, 8, 3, 4, 1, 5, 1, 3, 2, 3,
0, 7, 2, 8, 7, 6, 6, 8, 3, 0, 5, 8, 1,	3, 9, 4, 6, 6, 6, 7, 4, 0, 8, 9, 2,	3, 9, 4, 6, 6, 6, 7, 4, 0, 8, 9, 2,
8, 5, 2, 5, 3, 9, 5, 0, 9, 7, 7, 0, 9,	7, 6, 2, 8, 7, 2, 3, 3, 2, 3, 6, 3,	7, 6, 2, 8, 7, 2, 3, 3, 2, 3, 6, 3,
0, 1, 4, 3, 8, 0, 0, 6, 3, 6, 4, 7, 5,	5, 6, 0, 7, 3, 7, 9, 8, 4, 3, 3, 8,	5, 6, 0, 7, 3, 7, 9, 8, 4, 3, 3, 8,
6, 9, 7, 4, 7, 7, 4, 4, 6, 8, 2, 6, 3,	6, 1, 0, 7, 2, 8, 7, 6, 6, 8, 3, 0,	6, 1, 0, 7, 2, 8, 7, 6, 6, 8, 3, 0,
0, 8, 6, 1, 4, 0, 9, 1, 9, 8, 4, 7, 6,	5, 8, 1, 8, 5, 2, 5, 3, 9, 5, 0, 9,	5, 8, 1, 8, 5, 2, 5, 3, 9, 5, 0, 9,
6, 3, 2, 0, 7, 0, 2, 2, 2, 9, 1, 5, 4,	7, 7, 0, 9, 0, 1, 4, 3, 8, 0, 0, 6,	7, 7, 0, 9, 0, 1, 4, 3, 8, 0, 0, 6,
1, 0, 9, 3, 5, 6, 7, 9, 9, 5, 3, 1, 3,	3, 6, 4, 7, 5, 6, 9, 7, 4, 7, 7, 4,	3, 6, 4, 7, 5, 6, 9, 7, 4, 7, 7, 4,
0, 8, 7, 4, 7, 2, 8, 1, 6, 5, 9, 0, 6,	4, 6, 8, 2, 6, 3, 0, 8, 6, 1, 4, 0,	4, 6, 8, 2, 6, 3, 0, 8, 6, 1, 4, 0,
	9, 1, 9, 8, 4, 7, 6, 6, 3, 2, 0, 7,	9, 1, 9, 8, 4, 7, 6, 6, 3, 2, 0, 7,
	0, 2, 2, 2, 9, 1, 5, 4, 1, 0, 9, 3,	0, 2, 2, 2, 9, 1, 5, 4, 1, 0, 9, 3,
	5, 6, 7, 9, 9, 5, 3, 1, 3, 0, 8, 7,	5, 6, 7, 9, 9, 5, 3, 1, 3, 0, 8, 7,
	4, 7, 2, 8, 1, 6, 5, 9, 0, 6, 0, 8,	4, 7, 2, 8, 1, 6, 5, 9, 0, 6, 0, 8,
	8, 4, 6, 1, 5, 4, 8, 0, 5, 1, 5, 8,	8, 4, 6, 1, 5, 4, 8, 0, 5, 1, 5, 8,
	4, 3, 5, 7, 8, 5, 7, 1, 8, 0, 6, 5,	4, 3, 5, 7, 8, 5, 7, 1, 8, 0, 6, 5,
	8, 0, 2, 0, 2, 7, 6, 2, 3, 0, 2, 6,	8, 0, 2, 0, 2, 7, 6, 2, 3, 0, 2, 6,
	9, 8, 7, 3, 1, 4, 0, 4, 2, 1, 3, 2,	9, 8, 7, 3, 1, 4, 0, 4, 2, 1, 3, 2,
6, 1, 1, 3, 6, 9, 6, 4, 8, 9, 2, 5, 5,	0, 6, 2, 9, 3, 5, 6, 7, 6, 9, 6, 6,	0, 6, 2, 9, 3, 5, 6, 7, 6, 9, 6, 6,
5, 5, 5, 1, 7, 9, 5, 9, 2, 4, 9, 1, 6,	8, 1, 2, 7, 9, 4, 6, 7, 2, 6, 8, 4,	8, 1, 2, 7, 9, 4, 6, 7, 2, 6, 8, 4,
9, 5, 0, 3, 1, 0, 0, 3, 4, 4, 9, 0, 6,	5, 8, 4, 0, 1, 8, 7, 1, 1, 4, 7, 4,	5, 8, 4, 0, 1, 8, 7, 1, 1, 4, 7, 4,
6, 0, 3, 0, 1, 7, 8, 3, 4, 2, 2, 4, 9,	6, 2, 9, 5, 9, 9, 7, 9, 6, 1, 6, 8,	6, 2, 9, 5, 9, 9, 7, 9, 6, 1, 6, 8,
8, 1, 0, 2, 8, 7, 6, 6, 7, 2, 6, 8, 6,	1, 4, 2, 3, 4, 0, 6, 1, 1, 3, 6, 9,	1, 4, 2, 3, 4, 0, 6, 1, 1, 3, 6, 9,
	6, 4, 8, 9, 2, 5, 5, 5, 5, 5, 1, 7,	6, 4, 8, 9, 2, 5, 5, 5, 5, 5, 1, 7,
	9, 5, 9, 2, 4, 9, 1, 6, 9, 5, 0, 3,	9, 5, 9, 2, 4, 9, 1, 6, 9, 5, 0, 3,
	1, 0, 0, 3, 4, 4, 9, 0, 6, 6, 0, 3,	1, 0, 0, 3, 4, 4, 9, 0, 6, 6, 0, 3,
	0, 1, 7, 8, 3, 4, 2, 2, 4, 9, 8, 1,	0, 1, 7, 8, 3, 4, 2, 2, 4, 9, 8, 1,
	0, 2, 8, 7, 6, 6, 7, 2, 6, 8, 6, 7,	0, 2, 8, 7, 6, 6, 7, 2, 6, 8, 6, 7,
	5, 3, 1, 0, 0, 1, 1, 0, 4, 8, 5, 4,	5, 3, 1, 0, 0, 1, 1, 0, 4, 8, 5, 4,
	7, 0, 9, 8, 7, 0, 3, 3, 2, 2, 1, 6,	7, 0, 9, 8, 7, 0, 3, 3, 2, 2, 1, 6,
3, 7, 8, 7, 9, 4, 4, 6, 2, 7, 2, 4, 5,		7, 1, 5, 7, 4, 8, 6, 2, 4, 8, 6, 0,
	8, 1, 8, 8, 4, 6, 7, 5, 5, 5, 3, 1,	8, 1, 8, 8, 4, 6, 7, 5, 5, 5, 3, 1,
8, 7, 1, 2, 9, 0, 6, 2, 5, 4, 2, 2, 7,	I I	
	1, 9, 1, 1, 4, 1, 2, 8, 8, 0, 0, 3,	1, 9, 1, 1, 4, 1, 2, 8, 8, 0, 0, 3,
2, 4, 0, 5, 2, 6, 2, 7, 8, 1, 0, 1, 4,	1, 9, 1, 1, 4, 1, 2, 8, 8, 0, 0, 3, 2, 7, 8, 4, 8, 5, 6, 8, 0, 4, 1, 4,	1, 9, 1, 1, 4, 1, 2, 8, 8, 0, 0, 3, 2, 7, 8, 4, 8, 5, 6, 8, 0, 4, 1, 4,
2, 4, 0, 5, 2, 6, 2, 7, 8, 1, 0, 1, 4, 0, 5, 5, 4, 3, 0, 1, 6, 2, 9, 9, 0, 3,		

Test	Expected	Got
7, 1, 0, 1, 5, 7, 6, 0, 2, 3, 0, 3, 4,	4, 6, 2, 7, 2, 4, 5, 8, 7, 1, 2, 9,	4, 6, 2, 7, 2, 4, 5, 8, 7, 1, 2, 9,
2, 8, 8, 9, 1, 5, 2, 6, 0, 2, 8, 3, 9,	0, 6, 2, 5, 4, 2, 2, 7, 2, 4, 0, 5,	0, 6, 2, 5, 4, 2, 2, 7, 2, 4, 0, 5,
1, 3, 5, 7, 6, 7, 7, 0, 1, 0, 9, 0, 0,	2, 6, 2, 7, 8, 1, 0, 1, 4, 0, 5, 5,	2, 6, 2, 7, 8, 1, 0, 1, 4, 0, 5, 5,
9, 7, 3, 3, 5, 8, 8, 6, 5, 6, 9, 0, 9,	4, 3, 0, 1, 6, 2, 9, 9, 0, 3, 8, 7,	4, 3, 0, 1, 6, 2, 9, 9, 0, 3, 8, 7,
2, 9, 5, 3, 2, 3, 6, 1, 8, 8, 6, 2, 1,	7, 7, 5, 1, 6, 1, 4, 4, 4, 2, 9, 0,	7, 7, 5, 1, 6, 1, 4, 4, 4, 2, 9, 0,
0, 2, 5, 5, 0, 8, 0, 2, 7, 0, 6, 1, 9,	0, 8, 1, 4, 8, 9, 2, 7, 4, 0, 4, 5,	0, 8, 1, 4, 8, 9, 2, 7, 4, 0, 4, 5,
6, 6, 1, 4, 1, 6, 2, 0, 8, 8, 2, 9, 3,	7, 1, 0, 1, 5, 7, 6, 0, 2, 3, 0, 3,	7, 1, 0, 1, 5, 7, 6, 0, 2, 3, 0, 3,
7, 8, 6, 2, 6, 2, 8, 2, 2, 6, 3, 9, 9,	4, 2, 8, 8, 9, 1, 5, 2, 6, 0, 2, 8,	4, 2, 8, 8, 9, 1, 5, 2, 6, 0, 2, 8,
0, 7, 6, 6, 4, 4, 0, 6, 2, 8, 6, 4, 0,	3, 9, 1, 3, 5, 7, 6, 7, 7, 0, 1, 0,	3, 9, 1, 3, 5, 7, 6, 7, 7, 0, 1, 0,
8, 2, 3, 0, 9, 6, 6, 5, 1, 5, 8, 4, 7,	9, 0, 0, 9, 7, 3, 3, 5, 8, 8, 6, 5,	9, 0, 0, 9, 7, 3, 3, 5, 8, 8, 6, 5,
9, 6, 6, 1, 8, 0, 0, 7, 9, 1, 0, 1, 1,	6, 9, 0, 9, 2, 9, 5, 3, 2, 3, 6, 1,	6, 9, 0, 9, 2, 9, 5, 3, 2, 3, 6, 1,
4, 0, 9, 3, 8, 0, 5, 0, 7, 4, 7, 6, 6,	8, 8, 6, 2, 1, 0, 2, 5, 5, 0, 8, 0,	8, 8, 6, 2, 1, 0, 2, 5, 5, 0, 8, 0,
1, 1, 4, 0, 3, 4, 2, 2, 6, 7, 5, 1, 6,	2, 7, 0, 6, 1, 9, 6, 6, 1, 4, 1, 6,	2, 7, 0, 6, 1, 9, 6, 6, 1, 4, 1, 6,
5, 2, 0, 3, 2, 0, 7, 8, 1, 5, 9, 3, 8,	2, 0, 8, 8, 2, 9, 3, 7, 8, 6, 2, 6,	2, 0, 8, 8, 2, 9, 3, 7, 8, 6, 2, 6,
4, 0, 0, 0, 3, 5, 5, 4, 4, 5, 0, 7, 3,	2, 8, 2, 2, 6, 3, 9, 9, 0, 7, 6, 6,	2, 8, 2, 2, 6, 3, 9, 9, 0, 7, 6, 6,
3, 8, 7, 4, 1, 2, 8, 1, 6, 7, 9, 7, 8,	4, 4, 0, 6, 2, 8, 6, 4, 0, 8, 2, 3,	4, 4, 0, 6, 2, 8, 6, 4, 0, 8, 2, 3,
3, 0, 2, 9, 4, 7, 6, 3, 7, 0, 5, 5, 2,	0, 9, 6, 6, 5, 1, 5, 8, 4, 7, 9, 6,	0, 9, 6, 6, 5, 1, 5, 8, 4, 7, 9, 6,
1, 1, 3, 8, 9, 8, 2, 3, 3, 3, 8, 3, 6,	6, 1, 8, 0, 0, 7, 9, 1, 0, 1, 1, 4,	6, 1, 8, 0, 0, 7, 9, 1, 0, 1, 1, 4,
4, 7, 3, 1, 2, 6, 1, 9, 9, 4, 2, 6, 5,	0, 9, 3, 8, 0, 5, 0, 7, 4, 7, 6, 6,	0, 9, 3, 8, 0, 5, 0, 7, 4, 7, 6, 6,
5, 6, 1, 4, 7, 7, 6, 5, 3, 0, 5, 0, 2,	1, 1, 4, 0, 3, 4, 2, 2, 6, 7, 5, 1,	1, 1, 4, 0, 3, 4, 2, 2, 6, 7, 5, 1,
2, 5, 7, 1, 7, 6, 4, 3, 8, 0, 9, 1, 6,	6, 5, 2, 0, 3, 2, 0, 7, 8, 1, 5, 9,	6, 5, 2, 0, 3, 2, 0, 7, 8, 1, 5, 9,
6, 0, 8, 5, 9, 9, 9, 0, 0, 9, 2, 2, 5,	3, 8, 4, 0, 0, 0, 3, 5, 5, 4, 4, 5,	3, 8, 4, 0, 0, 0, 3, 5, 5, 4, 4, 5,
2, 2, 6, 7, 9, 0, 3, 3, 0, 0, 0, 4, 7,	0, 7, 3, 3, 8, 7, 4, 1, 2, 8, 1, 6,	0, 7, 3, 3, 8, 7, 4, 1, 2, 8, 1, 6,
3, 6, 3, 5, 8, 2, 0, 5, 4, 3, 0, 6, 0,	7, 9, 7, 8, 3, 0, 2, 9, 4, 7, 6, 3,	7, 9, 7, 8, 3, 0, 2, 9, 4, 7, 6, 3,
5, 5, 1, 3, 7, 3, 2, 7, 5, 2, 7, 1, 1,	7, 0, 5, 5, 2, 1, 1, 3, 8, 9, 8, 2,	7, 0, 5, 5, 2, 1, 1, 3, 8, 9, 8, 2,
5, 0, 4, 0, 3, 2,snip 3, 2,	3, 3, 3, 8, 3, 6, 4, 7, 3, 1, 2, 6,	3, 3, 3, 8, 3, 6, 4, 7, 3, 1, 2, 6,
9, 9, 5, 3, 0, 6, 2, 9, 1, 0, 3, 6, 6,	1, 9, 9, 4, 2, 6, 5, 5, 6, 1, 4, 7,	1, 9, 9, 4, 2, 6, 5, 5, 6, 1, 4, 7,
3, 0, 2, 7, 2, 8, 7, 9, 5, 6, 4, 2, 4,	7, 6, 5, 3, 0, 5, 0, 2, 2, 5, 7, 1,	7, 6, 5, 3, 0, 5, 0, 2, 2, 5, 7, 1,
0, 3, 9, 3, 9, 1, 1, 5, 8, 0, 8, 5, 5,	7, 6, 4, 3, 8, 0, 9, 1, 6, 6, 0, 8,	7, 6, 4, 3, 8, 0, 9, 1, 6, 6, 0, 8,
8, 1, 0, 7, 4, 9, 1, 2, 2, 4, 9, 4, 6,	5, 9, 9, 9, 0, 0, 9, 2, 2, 5, 2, 2,	5, 9, 9, 9, 0, 0, 9, 2, 2, 5, 2, 2,
5, 3, 8, 6, 8, 0, 1, 4, 3, 0, 8, 7, 9,	6, 7, 9, 0, 3, 3, 0, 0, 0, 4, 7, 3,	6, 7, 9, 0, 3, 3, 0, 0, 0, 4, 7, 3,
5, 7, 0, 0, 4, 8, 3, 5, 6, 7, 2, 4, 7,	6, 3, 5, 8, 2, 0, 5, 4, 3, 0, 6, 0,	6, 3, 5, 8, 2, 0, 5, 4, 3, 0, 6, 0,
3, 3, 6, 4, 5, 4, 5, 9, 7, 8, 1, 7, 3,	5, 5, 1, 3, 7, 3, 2, 7, 5, 2, 7, 1,	5, 5, 1, 3, 7, 3, 2, 7, 5, 2, 7, 1,
4, 5, 6, 1, 7, 6, 3, 1, 4, 2, 5, 1, 7,	1, 5, 0, 4, 0, 3, 2, 3, 4, 5, 0,	1, 5, 0, 4, 0, 3, 2, 3, 4, 5, 0,
5, 0, 5, 1, 5, 0, 7, 4, 6, 1, 9, 1, 5,	snip 4, 8, 9, 5, 5, 8, 8, 9,	snip 4, 8, 9, 5, 5, 8, 8, 9,
8, 1, 1, 0, 3, 5, 0, 1, 6, 9, 1, 3, 5,	8, 6, 7, 8, 3, 8, 8, 9, 5, 5, 9, 9,	8, 6, 7, 8, 3, 8, 8, 9, 5, 5, 9, 9, 0, 1, 6, 8, 9, 3, 8, 9, 7, 3, 3, 6,
7, 2, 7, 0, 4, 7, 7, 1, 0, 6, 7, 6, 4, 1, 1, 0, 2, 2, 2, 6, 7, 1, 3, 9, 8, 6,	0, 1, 6, 8, 9, 3, 8, 9, 7, 3, 3, 6, 6, 7, 7, 6, 6, 6, 5, 6, 7, 7, 9, 7,	6, 7, 7, 6, 6, 6, 5, 6, 7, 7, 9, 7,
4, 6, 2, 2, 0, 9, 5, 0, 8, 3, 0, 8, 7,	7, 9, 4, 5, 7, 7, 7, 9, 9, 0, 8, 8,	7, 9, 4, 5, 7, 7, 7, 9, 9, 0, 8, 8,
1, 9, 5, 9, 1, 3, 5, 2, 2, 7, 6, 9, 7,	8, 8, 9, 8, 8, 9, 4, 4, 9, 9, 9, 0,	8, 8, 9, 8, 8, 9, 4, 4, 9, 9, 9, 0,
7, 6, 7, 6, 9, 3, 1, 2, 8, 9, 4, 3, 5,	0, 6, 6, 6, 9, 9, 0, 3, 3, 6, 7, 7,	0, 6, 6, 6, 9, 9, 0, 3, 3, 6, 7, 7,
7, 3, 2, 1, 2, 1, 6, 8, 0, 3, 3, 9, 8,	7, 2, 7, 8, 8, 9, 9, 0, 6, 9, 9, 4,	7, 2, 7, 8, 8, 9, 9, 0, 6, 9, 9, 4,
1, 9, 7, 8, 7, 1, 7, 7, 6, 2, 6, 3, 8,	9, 3, 9, 0, 9, 0, 5, 5, 8, 9, 8, 9,	9, 3, 9, 0, 9, 0, 5, 5, 8, 9, 8, 9,
4, 5, 7, 9, 8, 1, 7, 1, 1, 5, 9, 1, 0,	8, 8, 9, 7, 7, 9, 9, 0, 2, 4, 4, 9,	8, 8, 9, 7, 7, 9, 9, 0, 2, 4, 4, 9,
9, 2, 1, 2, 3, 5, 6, 2, 8, 7, 5, 2, 8,	0, 6, 8, 8, 8, 9, 8, 9, 1, 4, 8, 8,	0, 6, 8, 8, 8, 9, 8, 9, 1, 4, 8, 8,
5, 3, 9, 5, 0, 8, 2, 5, 9, 8, 4, 6, 5,	8, 9, 9, 0, 7, 8, 4, 4, 8, 9, 5, 6,	8, 9, 9, 0, 7, 8, 4, 4, 8, 9, 5, 6,
7, 4, 7, 8, 9, 1, 6, 7, 4, 8, 2, 8, 9,	7, 9, 4, 7, 9, 6, 6, 9, 5, 9, 5, 9,	7, 9, 4, 7, 9, 6, 6, 9, 5, 9, 5, 9,
2, 2, 5, 9, 7, 0, 5, 7, 3, 5, 6, 2, 7,	0, 8, 9, 7, 9, 4, 5, 6, 7, 7, 9, 7,	0, 8, 9, 7, 9, 4, 5, 6, 7, 7, 9, 7,
3, 7, 4, 6, 9, 4, 1, 0, 8, 9, 1, 0, 8,	4, 4, 5, 5, 7, 7, 9, 7, 5, 7, 5, 7,	4, 4, 5, 5, 7, 7, 9, 7, 5, 7, 5, 7,
4, 9, 4, 7, 2, 5, 9, 5, 5, 3, 0, 3, 8,	7, 9, 6, 9, 9, 0, 5, 8, 9, 3, 3, 3,	7, 9, 6, 9, 9, 0, 5, 8, 9, 3, 3, 3,
4, 0, 6, 6, 8, 2, 4, 6, 1, 3, 9, 9, 0,	5, 6, 1, 6, 9, 0, 3, 5, 7, 9, 7, 9,	5, 6, 1, 6, 9, 0, 3, 5, 7, 9, 7, 9,
2, 2, 1, 7, 2, 2, 7, 0, 4, 5, 2, 6, 7,	4, 7, 9, 9, 6, 6, 7, 9, 7, 6, 2, 2,	4, 7, 9, 9, 6, 6, 7, 9, 7, 6, 2, 2,
0, 1, 2, 0, 2, 0, 0, 5, 6, 8, 7, 3, 6,	2, 6, 6, 6, 7, 9, 3, 9, 0, 9, 9, 6,	2, 6, 6, 6, 7, 9, 3, 9, 0, 9, 9, 6,
4, 8, 3, 5, 3, 7, 2, 1, 5, 8, 5, 3, 6,	9, 9, 9, 9, 0, 8, 8, 9, 8, 8, 9, 9,	9, 9, 9, 9, 0, 8, 8, 9, 8, 8, 9, 9,
2, 5, 9, 4, 2, 2, 4, 5, 1, 8, 7, 3, 0,	9, 0, 9, 0, 3, 5, 7, 7, 7, 9, 9, 0,	9, 0, 9, 0, 3, 5, 7, 7, 7, 9, 9, 0,
8, 0, 4, 6, 5, 1, 7, 0, 2, 0, 5, 2, 7,	9, 9, 7, 9, 9, 0, 8, 2, 8, 9, 0, 5,	9, 9, 7, 9, 9, 0, 8, 2, 8, 9, 0, 5,
9, 6, 9, 0, 4, 1, 4, 2, 6, 5, 1, 8, 6,	5, 7, 8, 6, 6, 2, 6, 6, 8, 9, 3, 9,	5, 7, 8, 6, 6, 2, 6, 6, 8, 9, 3, 9,
4, 2, 2, 2, 6, 5, 9, 6, 1, 3, 8, 6, 8,	9, 0, 9, 9, 0, 8, 9, 8, 7, 8, 8, 8,	9, 0, 9, 9, 0, 8, 9, 8, 7, 8, 8, 8,
5, 5, 3, 4, 5, 5, 0, 1, 9, 3, 8, 8, 8,	6, 8, 8, 9, 5, 7, 9, 0, 9, 7, 9, 5,	6, 8, 8, 9, 5, 7, 9, 0, 9, 7, 9, 5,
3, 6, 1, 0, 5, 3, 3, 0, 0, 2, 1, 4, 6,	5, 9, 0, 9, 9, 0, 3, 2, 3, 5, 6, 8,	5, 9, 0, 9, 9, 0, 3, 2, 3, 5, 6, 8,
3, 1, 6, 0, 1, 0, 4, 7, 5, 4, 3, 4, 5,	8, 9, 8, 8, 8, 9, 9, 9, 0, 8, 8, 9,	8, 9, 8, 8, 8, 9, 9, 9, 0, 8, 8, 9,
	5, 9, 0, 9, 6, 7, 7, 8, 7, 8, 9, 0,	5, 9, 0, 9, 6, 7, 7, 8, 7, 8, 9, 0,
7, 6, 8, 4, 2, 7, 2, 5, 9, 9, 3, 0, 5,		
7, 6, 8, 4, 2, 7, 2, 5, 9, 9, 3, 0, 5, 8, 0, 4, 1, 0, 9, 3, 9, 4, 3, 8, 7, 6,	6, 7, 8, 8, 9, 8, 9, 0, 5, 5, 9, 0,	6, 7, 8, 8, 9, 8, 9, 0, 5, 5, 9, 0,
		6, 7, 8, 8, 9, 8, 9, 0, 5, 5, 9, 0, 9, 5, 7, 9, 5, 6, 7, 7, 9, 7, 9, 6,

Test	Expected	Got
2, 2, 7, 4, 9, 5, 3, 7, 9, 6, 6, 2, 9,	7, 9, 5, 9, 0, 8, 8, 8, 3, 8, 9, 6,	7, 9, 5, 9, 0, 8, 8, 8, 3, 8, 9, 6,
8, 6, 0, 7, 1, 6, 7, 6, 1, 3, 8, 3, 7,	6, 8, 8, 9, 4, 6, 9, 3, 9, 0, 0, 2,	6, 8, 8, 9, 4, 6, 9, 3, 9, 0, 0, 2,
9, 4, 2, 9, 1, 9, 5, 5, 1, 1, 9, 5, 6,	7, 7, 7, 8, 7, 7, 8, 4, 5, 6, 6, 7,	7, 7, 7, 8, 7, 7, 8, 4, 5, 6, 6, 7,
7, 8, 3, 4, 2, 2, 7, 1, 3, 1, 7, 0, 8,		8, 1, 2, 5, 2, 5, 5, 5, 6, 8, 9, 8,
9, 7, 5, 3, 9, 4, 0, 8, 3, 3, 8, 0, 1,		6, 8, 8, 9, 5, 7, 7, 8, 5, 5, 8, 9,
1, 7, 3, 3, 5, 1, 6, 4, 0, 3, 8, 9, 6,	6, 6, 9, 5, 9, 0, 5, 4, 4, 5, 8, 8,	6, 6, 9, 5, 9, 0, 5, 4, 4, 5, 8, 8,
1, 2, 3, 5, 7, 6, 9, 7, 9, 6, 8, 5, 1,		9, 8, 8, 8, 9, 4, 6, 7, 7, 7, 9, 2,
4, 2, 2, 5, 2, 8, 2, 4, 7, 4, 4, 0, 4,	5, 5, 7, 7, 9, 0, 9, 0, 4, 6, 4, 6,	5, 5, 7, 7, 9, 0, 9, 0, 4, 6, 4, 6,
2, 7, 1, 4, 1, 4, 2, 4, 8, 7, 6, 9, 3,		6, 8, 8, 8, 9, 9, 6, 6, 6, 6, 9, 9,
6, 7, 6, 2, 9, 3, 6, 4, 1, 3, 5, 5, 6,		0, 8, 3, 8, 9, 8, 9, 9, 9, 4, 5, 9,
1, 2, 6, 1, 7, 5, 1, 5, 5, 6, 7, 3, 9,	9, 1, 9, 0, 8, 9, 9, 9, 6, 7, 5, 5,	9, 1, 9, 0, 8, 9, 9, 9, 6, 7, 5, 5,
7, 5, 0, 5, 1, 2, 0, 3, 0, 8, 8, 2, 0,		6, 4, 4, 2, 2, 4, 4, 6, 7, 6, 6, 7,
9, 4, 0, 3, 5, 5, 8, 0, 1, 7, 4, 0, 1,		1, 4, 4, 7, 8, 7, 5, 4, 5, 7, 8, 8,
9, 3, 9, 0, 7, 3, 7, 1, 6, 5, 7, 3, 9,	9, 7, 7, 9, 5, 9, 0, 0, 5, 5, 8, 9,	9, 7, 7, 9, 5, 9, 0, 0, 5, 5, 8, 9,
1, 2, 3, 1, 0, 0, 3, 3, 6, 3, 7, 3, 7,		4, 9, 9, 9, 0, 9, 0, 8, 8, 9, 9, 9,
5, 8, 4, 7, 7, 7, 5, 7, 3, 3, 5, 8, 1,		9, 0, 3, 9, 9, 9, 0, 7, 8, 8, 8, 9,
2, 9, 3, 7, 6, 0, 2, 2, 2, 3, 7, 8, 9,		0, 8, 4, 8, 8, 9, 6, 7, 7, 7, 9, 6,
4, 5, 7, 3, 4, 0, 1, 0, 4, 7, 5, 3, 2,		6, 7, 7, 7, 9, 9, 0, 7, 7, 9, 0, 9,
2, 2, 8, 8, 0, 1, 9, 1, 7, 3, 8, 6, 0,	9, 9, 0, 9, 7, 7, 8, 6, 7, 8, 8, 3,	9, 9, 0, 9, 7, 7, 8, 6, 7, 8, 8, 3,
7, 6, 8, 9, 0, 2, 7, 9, 9, 3, 8, 5, 2,		8, 9, 7, 9, 0, 9, 9, 0, 9, 0, 9, 9,
5, 6, 4, 2, 9, 5, 1, 3, 8, 8, 7, 6, 6,		9, 9, 0, 6, 7, 8, 9, 4, 7, 7, 7, 8,
3, 8, 6, 6, 7, 8, 0, 3, 9, 8, 9, 7, 8,	3, 7, 7, 8, 8, 9, 0, 9, 9, 9, 0, 8,	3, 7, 7, 8, 8, 9, 0, 9, 9, 9, 0, 8,
4, 6, 1, 9, 7, 1, 7, 1, 3, 0, 4, 8, 8,		8, 9, 8, 8, 9, 1, 7, 7, 8, 5, 5, 6,
1, 9, 1, 7, 4, 0, 1, 2, 2, 3, 8, 9, 8,	6, 8, 8, 3, 8, 9, 0, 7, 2, 3, 5, 7,	6, 8, 8, 3, 8, 9, 0, 7, 2, 3, 5, 7,
0, 4, 7, 2, 5, 7, 0, 2, 7, 4, 5, 7, 9,	9, 9, 0, 9, 0, 8, 9, 8, 4, 5, 5, 5,	9, 9, 0, 9, 0, 8, 9, 8, 4, 5, 5, 5,
5, 9, 4, 7, 9, 2, 1, 7, 8, 1, 7, 7, 3,	8, 8, 9, 4, 7, 8, 7, 7, 4, 7, 7, 8,	8, 8, 9, 4, 7, 8, 7, 7, 4, 7, 7, 8,
7, 8, 4, 0, 3, 3, 5, 0, 4, 1, 8, 4, 4,	4, 8, 4, 8, 4, 8, 9, 9, 9, 0, 6, 7,	4, 8, 4, 8, 4, 8, 9, 9, 9, 0, 6, 7,
1, 6, 2, 9, 2, 7, 9, 0, 2, 1, 1, 3, 4,	9, 9, 9, 0, 6, 7, 5, 3, 5, 6, 6, 7,	9, 9, 9, 0, 6, 7, 5, 3, 5, 6, 6, 7,
5, 1, 1, 8, 2, 8, 4, 3, 2, 1, 6, 9, 8,	2, 6, 7, 7, 9, 6, 5, 6, 6, 7, 9, 9,	2, 6, 7, 7, 9, 6, 5, 6, 6, 7, 9, 9,
2, 8, 6, 6, 7, 4, 2, 6, 8, 2, 6, 2, 2,	0, 8, 8, 5, 8, 2, 3, 3, 8, 8, 9, 9,	0, 8, 8, 5, 8, 2, 3, 3, 8, 8, 9, 9,
2, 6, 7, 7, 0, 1, 6, 0, 8, 3, 2, 1, 7,	9, 9, 0, 5, 3, 5, 8, 8, 9, 1, 7, 9,	9, 9, 0, 5, 3, 5, 8, 8, 9, 1, 7, 9,
6, 2, 0, 6, 6, 2, 6, 6, 0, 1, 5, 6, 7,	9, 1, 9, 0, 9, 0, 7, 9, 7, 9, 6, 7,	9, 1, 9, 0, 9, 0, 7, 9, 7, 9, 6, 7,
6, 0, 4, 8, 1, 0, 8, 3, 7, 4, 5, 1, 2,	7, 9, 9, 0, 2, 3, 6, 3, 3, 3, 6, 6,	7, 9, 9, 0, 2, 3, 6, 3, 3, 3, 6, 6,
9, 2, 4, 7, 6, 8, 5, 2, 6, 9, 8, 2, 7,	7, 7, 8, 7, 8, 8, 9, 7, 8, 8, 8, 7,	7, 7, 8, 7, 8, 8, 9, 7, 8, 8, 8, 7,
4, 1, 8, 1, 8, 5, 2, 5, 9, 2, 9, 8, 3,	8, 5, 5, 8, 9, 2, 9, 0, 7, 8, 7, 2,	8, 5, 5, 8, 9, 2, 9, 0, 7, 8, 7, 2,
0, 5, 1, 4, 1, 1, 3, 6, 0, 2, 4, 3, 8,	3, 3, 3, 7, 8, 9, 0, 5, 7, 8, 4, 7,	3, 3, 3, 7, 8, 9, 0, 5, 7, 8, 4, 7,
5, 7, 8, 1, 1, 0, 0, 5, 7, 6, 2, 6, 8,	1, 4, 4, 7, 8, 8, 8, 8, 8, 8, 9, 9,	1, 4, 4, 7, 8, 8, 8, 8, 8, 8, 9, 9,
3, 7, 8, 5, 9, 7, 4, 9, 0, 1, 2, 4, 1,	1, 9, 0, 7, 8, 8, 9, 7, 7, 8, 8, 9,	1, 9, 0, 7, 8, 8, 9, 7, 7, 8, 8, 9,
0, 3, 7, 8, 0, 5, 8, 0, 9, 1, 6, 5, 9,		0, 2, 7, 9, 0, 0, 8, 9, 6, 5, 6, 9,
8, 6, 8, 8, 0, 1, 4, 2, 9, 4, 3, 9, 8,	9, 9, 0, 8, 3, 8, 9, 9, 8, 8, 8, 8,	9, 9, 0, 8, 3, 8, 9, 9, 8, 8, 8, 8,
6, 9, 1, 4, 3, 9, 5, 9, 9, 8, 4, 7, 2,	9, 7, 7, 8, 9, 3, 9, 0, 9, 0, 8, 9,	9, 7, 7, 8, 9, 3, 9, 0, 9, 0, 8, 9,
9, 0, 6, 3, 1, 0, 7, 9, 7, 8, 6, 6, 2,	6, 9, 9, 0, 8, 7, 8, 3, 4, 4, 8, 9,	6, 9, 9, 0, 8, 7, 8, 3, 4, 4, 8, 9,
7, 9, 5, 6, 9, 1, 3, 3, 2, 5, 1, 8, 7,	9, 9, 0, 7, 8, 8, 1, 2, 3, 3, 8, 9,	9, 9, 0, 7, 8, 8, 1, 2, 3, 3, 8, 9,
5, 0, 7, 8, 3, 4, 3, 9, 2, 6, 9, 9, 1,		0, 9, 4, 7, 9, 5, 7, 9, 2, 7, 9, 5,
0, 6, 0, 8, 1, 0, 8, 5, 8, 7, 3, 2, 3,	7, 9, 0, 9, 0, 7, 9, 0, 7, 7, 8, 9,	7, 9, 0, 9, 0, 7, 9, 0, 7, 7, 8, 9,
3, 8, 7, 8, 9, 5, 5, 5, 4, 4, 2, 9, 7,	7, 8, 8, 7, 8, 9, 5, 3, 5, 5, 8, 4,	7, 8, 8, 7, 8, 9, 5, 3, 5, 5, 8, 4,
0, 8, 6, 7, 1, 6, 8, 8, 6, 6, 4, 2, 2,	8, 8, 9, 6, 6, 6, 9, 9, 0, 7, 9, 0,	8, 8, 9, 6, 6, 6, 9, 9, 0, 7, 9, 0,
7, 2, 7, 9, 6, 3, 4, 0, 7, 2, 2, 1, 6,		2, 3, 3, 3, 4, 5, 8, 8, 8, 9, 8, 9,
7, 9, 3, 6, 6, 5, 3, 1, 1, 2, 4, 4, 9,	6, 6, 6, 6, 9, 0, 9, 8, 9, 7, 7, 8,	6, 6, 6, 6, 9, 0, 9, 8, 9, 7, 7, 8,
7, 9, 1, 4, 8, 0, 1, 4, 1, 7, 2, 7, 2,	6, 6, 8, 9, 6, 7, 6, 6, 6, 7, 8, 8,	6, 6, 8, 9, 6, 7, 6, 6, 6, 7, 8, 8,
6, 0, 3, 4, 2, 8, 9, 0, 1, 4, 8, 4, 0,	1, 6, 8, 8, 9, 7, 7, 7, 8, 7, 6, 6,	1, 6, 8, 8, 9, 7, 7, 7, 8, 7, 6, 6,
8, 8, 2, 8, 9, 0, 6, 3, 6, 5, 3, 8, 6,	7, 7, 6, 7, 7, 1, 5, 6, 7, 8, 8, 4,	7, 7, 6, 7, 7, 1, 5, 6, 7, 8, 8, 4,
1, 4, 3, 0, 5, 7, 6, 6, 9, 1, 2, 5, 2,	8, 9, 8, 8, 9, 7, 9, 5, 9, 2, 9, 0,	8, 9, 8, 8, 9, 7, 9, 5, 9, 2, 9, 0,
6, 2, 2, 8, 3, 1, 9, 8, 8, 9, 2, 2, 6,	4, 7, 8, 8, 9, 6, 6, 9, 0, 9, 7, 8,	4, 7, 8, 8, 9, 6, 6, 9, 0, 9, 7, 8,
4, 4, 6, 0, 4, 4, 0, 4, 0, 6, 4, 1, 4,	8, 8, 9, 8, 9, 9, 5, 9, 0, 9, 0, 9,	8, 8, 9, 8, 9, 9, 5, 9, 0, 9, 0, 9,
5, 1, 0, 7, 4, 5, 8, 8, 6, 2, 0, 0, 2,	5, 5, 6, 4, 6, 3, 3, 6, 8, 2, 4, 8,	5, 5, 6, 4, 6, 3, 3, 6, 8, 2, 4, 8,
4, 3, 3, 0, 3, 9, 8, 4, 0, 9, 6, 9, 6,	8, 9, 7, 8, 9, 5, 5, 5, 5, 7, 8, 8,	8, 9, 7, 8, 9, 5, 5, 5, 5, 7, 8, 8,
7, 0, 0, 8, 6, 8, 1, 2, 6, 9, 5, 9, 1,	6, 8, 9, 7, 8, 9, 9, 0, 9, 9, 0, 1,	6, 8, 9, 7, 8, 9, 9, 0, 9, 9, 0, 1,
5, 1, 9};	2, 4, 7, 3, 3, 7, 8, 9, 5, 8, 9, 9,	2, 4, 7, 3, 3, 7, 8, 9, 5, 8, 9, 9,
LLNode* head =	0, 6, 9, 9, 0, 9, 8, 9, 9, 1, 4, 9,	0, 6, 9, 9, 0, 9, 8, 9, 9, 1, 4, 9,
LLNode::createWithIterators(arr, arr +	9, 0, 9, 9, 0, 9, 9, 0, 4, 9, 9, 0,	9, 0, 9, 9, 0, 9, 0, 4, 9, 9, 0,
<pre>sizeof(arr) / sizeof(int));</pre>	9, 0, 0, 9, 7, 9, 9, 0, 6, 7, 7, 7,	9, 0, 0, 9, 7, 9, 9, 0, 6, 7, 7, 7,
LLNode::printList(head);	7, 9, 0, 8, 9, 7, 7, 7, 9, 0, 6, 9,	7, 9, 0, 8, 9, 7, 7, 7, 9, 0, 6, 9,
cout << "\n";	0, 3, 5, 5, 5, 8, 8, 9, 8, 7, 7, 8,	0, 3, 5, 5, 5, 8, 8, 9, 8, 7, 7, 8,
cout XX (II )		

Test	Expecte	ed .	Got	
replaceFirstGreater(hea	ad); 8, 9, 8,	, 8, 9, 8, 9, 8, 8, 3	, 8, 8, 8, 9, 8	3, 8, 9, 8, 9, 8, 8, 3, 8, 8,
LLNode::printList(newhe	ead); 9, 8, 9,	, 0, 9, 9, 9, 9, 9, 9	, 0, 8, 9, 8, 9	9, 0, 9, 9, 9, 9, 9, 0, 8,
		, 8, 6, 8, 9, 9, 7, 7		7, 8, 6, 8, 9, 9, 7, 7, 7, 7,
		, 9, 0, 7, 4, 7, 7, 9		7, 9, 0, 7, 4, 7, 7, 9, 6, 6,
		, 0, 6, 9, 9, 9, 4, 2		0, 0, 6, 9, 9, 9, 4, 2, 2, 4,
		, 9, 0, 4, 8, 9, 1, 4		0, 9, 0, 4, 8, 9, 1, 4, 7, 7,
		, 6, 8, 3, 4, 8, 8, 9		8, 6, 8, 3, 4, 8, 8, 9, 0, 1,
		, 8, 8, 9, 9, 8, 9, 0 <sub>.</sub> , 8, 9, 7, 4, 5, 5, 5,		9, 8, 8, 9, 9, 8, 9, 0, 6, 8, 8, 8, 9, 7, 4, 5, 5, 5, 7, 9,
	' ' '	, 2, 5, 6, 6, 8, 8, 8,		), 2, 5, 6, 6, 8, 8, 8, 9, 9,
		, 9, 0, 6, 6, 7, 6, 6,		0, 9, 0, 6, 6, 7, 6, 6, 7, 4,
		, 6, 6, 7, 5, 4, 5, 7		4, 6, 6, 7, 5, 4, 5, 7, 7, 7,
		, 9, 9, 9, 4, 2, 2, 4		8, 9, 9, 9, 4, 2, 2, 4, 9, 9,
	9, 3, 9,	, 0, 9, 9, 9, 0, 9, 0	, 7, 8, 9, 3, 9	9, 0, 9, 9, 9, 0, 9, 0, 7, 8,
	8, 8, 9,	, 8, 9, 2, 6, 9, 0, 9	, 0, 5, 8, 8, 9	9, 8, 9, 2, 6, 9, 0, 9, 0, 5,
	9, 9, 0]	]	9, 9, 0	9]
int arr[] = {7, 0, 6, 1	[7, 0, 6]	5, 1, 5, 4, 5, 3, 8,	7, 3, 0, [7, 0,	6, 1, 5, 4, 5, 3, 8, 7, 3, 0,
8, 7, 3, 0, 9, 4, 6, 2,	6, 2, 1, 2, 4, 9, 4, 6,	, 2, 6, 2, 1, 2, 4, 6	, 3, 5, 9, 4, 6	5, 2, 6, 2, 1, 2, 4, 6, 3, 5,
6, 3, 5, 5, 0, 3, 2, 2,	7, 7, 4, 8, 5, 5, 5, 0, 3,	, 2, 2, 7, 7, 4, 8, 5	, 0, 7,   5, 0, 3	3, 2, 2, 7, 7, 4, 8, 5, 0, 7,
0, 7, 1, 4, 5, 2, 4, 9,	2, 3, 3, 9, 9, 1, 4, 5	, 2, 4, 9, 2, 3, 3, 9	, 9, 1,   1, 4, 5	5, 2, 4, 9, 2, 3, 3, 9, 9, 1,
1, 0, 5, 8, 3, 4, 0, 5,		, 3, 4, 0, 5, 0, 2, 6		3, 3, 4, 0, 5, 0, 2, 6, 0, 3,
1, 3, 8, 2, 9, 0, 7, 1,		, 2, 9, 0, 7, 1, 3, 1		3, 2, 9, 0, 7, 1, 3, 1, 2, 6,
8, 4, 6, 9, 6, 4, 9, 9,		, 6, 9, 6, 4, 9, 9, 9		1, 6, 9, 6, 4, 9, 9, 9, 4, 0,
1, 4, 6, 7, 2, 5, 0, 9,		, 4, 6, 7, 2, 5, 0, 9		., 4, 6, 7, 2, 5, 0, 9, 6, 6,
9, 8, 4, 4, 2, 6, 7, 6, 8, 6, 4, 8, 2, 1, 2, 8,		, 9, 8, 4, 4, 2, 6, 7 <sub>1</sub>		., 9, 8, 4, 4, 2, 6, 7, 6, 2,
0, 6, 1, 3, 5, 6, 3, 9,		, 1, 8, 6, 4, 8, 2, 1 <sub>3</sub> , 5, 6, 0, 6, 1, 3, 5 <sub>2</sub>		5, 1, 8, 6, 4, 8, 2, 1, 2, 8, 8, 5, 6, 0, 6, 1, 3, 5, 6, 3,
8, 3, 2, 5, 9, 3, 2, 4,		, 4, 4, 0, 8, 3, 2, 5		1, 4, 4, 0, 8, 3, 2, 5, 9, 3,
7, 3, 7, 0, 0, 6, 5, 7,		, 8, 7, 4, 1, 7, 3, 7		., 8, 7, 4, 1, 7, 3, 7, 0, 0,
2, 6, 9, 1, 3, 7, 6, 6,		, 0, 2, 5, 2, 0, 2, 6		7, 0, 2, 5, 2, 0, 2, 6, 9, 1,
7, 6, 7, 5, 4, 2, 2, 1,		, 6, 9, 2, 2, 1, 1, 7		5, 6, 9, 2, 2, 1, 1, 7, 6, 7,
7, 5, 9, 9, 1, 3, 8, 9,		, 2, 1, 6, 4, 1, 2, 0		2, 2, 1, 6, 4, 1, 2, 0, 7, 5,
2, 1, 8, 9, 4, 6, 4, 0,	9, 8, 7, 1, 5, 9, 9, 1,	, 3, 8, 9, 5, 1, 3, 4	, 6, 2, 9, 9, 1	., 3, 8, 9, 5, 1, 3, 4, 6, 2,
0, 7, 1, 3, 9, 7, 8, 3,	4, 3, 3, 9, 0, 1, 8, 9,	, 4, 6, 4, 0, 9, 8, 7	, 1, 5, 1, 8, 9	), 4, 6, 4, 0, 9, 8, 7, 1, 5,
8, 0, 1, 3, 1, 1, 4, 7,	7, 0, 1, 4, 6, 0, 7, 1,	, 3, 9, 7, 8, 3, 4, 3	, 3, 9, 0, 7, 1	., 3, 9, 7, 8, 3, 4, 3, 3, 9,
4, 1, 6, 5, 1, 3, 3, 0,	2, 6, 2, 8, 5, 0, 8, 0,	, 1, 3, 1, 1, 4, 7, 7	, 0, 1, 0, 8, 0	), 1, 3, 1, 1, 4, 7, 7, 0, 1,
7, 9, 2, 0, 9, 2, 5, 9,		, 1, 6, 5, 1, 3, 3, 0		1, 1, 6, 5, 1, 3, 3, 0, 2, 6,
3, 7, 6, 8, 1, 1, 0, 8,		, 7, 9, 2, 0, 9, 2, 5		5, 7, 9, 2, 0, 9, 2, 5, 9, 3,
3, 8, 1, 1, 5, 2, 2, 0,		, 1, 3, 7, 6, 8, 1, 1		8, 1, 3, 7, 6, 8, 1, 1, 0, 8,
0, 5, 3, 3, 1, 0, 3, 9,		, 8, 7, 3, 8, 1, 1, 5		5, 8, 7, 3, 8, 1, 1, 5, 2, 2,
7, 8, 2, 0, 5, 0, 2, 9, 0, 2, 3, 7, 6, 2, 1, 8,		, 5, 3, 0, 0, 5, 3, 3 <sub>.</sub> , 0, 7, 2, 0, 7, 8, 2 <sub>.</sub>		2, 5, 3, 0, 0, 5, 3, 3, 1, 0, ., 0, 7, 2, 0, 7, 8, 2, 0, 5,
1, 6, 3, 7, 9, 5, 7, 9,		, 9, 9, 7, 5, 0, 0, 2		0, 9, 9, 7, 5, 0, 0, 2, 3, 7,
5, 9, 2, 4, 7, 5, 8, 2,		, 8, 5, 6, 8, 2, 8, 1		., 8, 5, 6, 8, 2, 8, 1, 6, 3,
2, 0, 7, 5, 2, 9, 6, 7,		, 7, 9, 0, 1, 4, 2, 3		5, 7, 9, 0, 1, 4, 2, 3, 5, 9,
2, 8, 0, 6, 0, 9, 0, 0,		, 5, 8, 2, 6, 8, 9, 1		7, 5, 8, 2, 6, 8, 9, 1, 9, 2,
6, 2, 4, 5, 1, 2, 4, 4,	1, 7, 5, 8, 1, 0, 7, 5,	, 2, 9, 6, 7, 8, 6, 0	, 9, 9, 0, 7, 5	5, 2, 9, 6, 7, 8, 6, 0, 9, 9,
4, 1, 3, 5, 6, 8, 0, 5,	8, 4, 1, 8, 4, 2, 8, 0,	, 6, 0, 9, 0, 0, 7, 0	, 6, 5, 2, 8, 0	), 6, 0, 9, 0, 0, 7, 0, 6, 5,
5, 5, 3, 6, 0, 5, 2, 6,	6, 5, 2, 9, 2, 0, 6, 2,	, 4, 5, 1, 2, 4, 4, 1	, 7, 5, 0, 6, 2	2, 4, 5, 1, 2, 4, 4, 1, 7, 5,
0, 8, 2, 9, 6, 8, 0, 1,	1, 6, 7, 6, 4, 8, 1, 4,	, 1, 3, 5, 6, 8, 0, 5	, 8, 4, 8, 1, 4	, 1, 3, 5, 6, 8, 0, 5, 8, 4,
2, 7, 4, 1, 1, 9, 5, 2,		, 5, 5, 3, 6, 0, 5, 2		, 5, 5, 3, 6, 0, 5, 2, 6, 6,
0, 9, 3, 4, 0, 1, 1, 7,		, 2, 0, 8, 2, 9, 6, 8		0, 2, 0, 8, 2, 9, 6, 8, 0, 1,
3, 2, 0, 8, 6, 2, 7, 7,		, 6, 4, 2, 7, 4, 1, 1		7, 6, 4, 2, 7, 4, 1, 1, 9, 5,
1, 2, 8, 6, 5, 7, 8, 0,		, 1, 2, 3, 0, 9, 3, 4		5, 1, 2, 3, 0, 9, 3, 4, 0, 1,
7, 0, 0, 6, 0, 3, 4, 8,		, 9, 0, 7, 3, 3, 2, 0		5, 9, 0, 7, 3, 3, 2, 0, 8, 6,
2, 7, 6, 1, 2, 6, 3, 8,		, 4, 9, 9, 9, 5, 1, 2 <sub>,</sub> 0 9 3 1 0 3 7		7, 4, 9, 9, 9, 5, 1, 2, 8, 6,
4, 4, 3, 5, 6, 5, 5, 7, 2, 0, 9, 3, 6, 2, 9, 1,		, 0, 9, 3, 1, 0, 3, 7 <sub>.</sub> , 4, 8, 7, 8, 8, 5, 6 <sub>.</sub>		3, 0, 9, 3, 1, 0, 3, 7, 0, 0, 8, 4, 8, 7, 8, 8, 5, 6, 2, 7,
3, 7, 0, 6, 8, 4, 9, 3,		, 6, 3, 8, 4, 8, 9, 1		2, 6, 3, 8, 4, 8, 9, 1, 5, 4,
1, 9, 4, 3, 9, 0, 5, 2,		0, 0, 0, 0, 4, 0, 0, 1		5, 6, 5, 5, 7, 5, 7, 7, 7, 3,
9, 8, 6, 5, 2, 8, 9, 6,		, 3, 6, 2, 9, 1, 2, 8		0, 3, 6, 2, 9, 1, 2, 8, 8, 4,
2, 4, 4, 1, 6, 6, 4, 1,		, 0, 6, 8, 4, 9, 3, 0		7, 0, 6, 8, 4, 9, 3, 0, 8, 0,
7, 3, 4, 3, 6, 3, 0, 9,		, 9, 4, 3, 9, 0, 5, 2		., 9, 4, 3, 9, 0, 5, 2, 7, 9,
		, 9, 8, 6, 5, 2, 8, 9		5, 9, 8, 6, 5, 2, 8, 9, 6, 9,
9, 8, 3, 1, 9, 3, 0, 6,		, ,, 0, 0, 3, 2, 0, 3	, , , , , , , , ,	, , , , , , , , , , , , ,

Test	Expected	Got
7, 7, 6, 8, 8, 3, 4, 2, 8, 7, 5, 6, 2,	7, 3, 3, 2, 5, 7, 3, 4, 3, 6, 3, 0,	7, 3, 3, 2, 5, 7, 3, 4, 3, 6, 3, 0,
2, 5, 9, 6, 8, 5, 0, 1, 8, 3, 1, 0, 0,	9, 0, 1, 9, 3, 0, 9, 8, 3, 1, 9, 3,	9, 0, 1, 9, 3, 0, 9, 8, 3, 1, 9, 3,
5, 0, 3, 1, 9, 1, 9, 3, 7, 6, 5, 2, 8,	0, 6, 0, 0, 7, 6, 0, 6, 9, 3, 6, 1,	0, 6, 0, 0, 7, 6, 0, 6, 9, 3, 6, 1,
0, 7, 4, 4, 8, 3, 9, 8, 7, 7, 5, 9, 6,	9, 5, 1, 6, 0, 5, 3, 1, 7, 7, 6, 8,	9, 5, 1, 6, 0, 5, 3, 1, 7, 7, 6, 8,
9, 4, 8, 7, 8, 4, 0, 2, 9, 0, 7, 5, 1,	8, 3, 4, 2, 8, 7, 5, 6, 2, 2, 5, 9,	8, 3, 4, 2, 8, 7, 5, 6, 2, 2, 5, 9,
3, 5, 6, 8, 9, 3, 0, 5, 4, 2, 6, 9, 6,	6, 8, 5, 0, 1, 8, 3, 1, 0, 0, 5, 0,	6, 8, 5, 0, 1, 8, 3, 1, 0, 0, 5, 0,
1, 2, 0, 9, 4, 9, 5, 7, 3, 8, 8, 8, 3,	3, 1, 9, 1, 9, 3, 7, 6, 5, 2, 8, 0,	3, 1, 9, 1, 9, 3, 7, 6, 5, 2, 8, 0,
4, 8, 4, 7, 2, 6, 5, 8, 1, 0, 4, 5, 3,	7, 4, 4, 8, 3, 9, 8, 7, 7, 5, 9, 6,	7, 4, 4, 8, 3, 9, 8, 7, 7, 5, 9, 6,
8, 1, 5, 9, 2, 0, 2, 4, 3, 7, 8, 0, 0,	9, 4, 8, 7, 8, 4, 0, 2, 9, 0, 7, 5,	9, 4, 8, 7, 8, 4, 0, 2, 9, 0, 7, 5,
1, 8, 6, 1, 6, 3, 4, 1, 1, 6, 5, 3, 5,	1, 3, 5, 6, 8, 9, 3, 0, 5, 4, 2, 6,	1, 3, 5, 6, 8, 9, 3, 0, 5, 4, 2, 6,
2, 3, 2, 5, 4, 7, 5, 4, 1, 4, 5, 2, 9,	9, 6, 1, 2, 0, 9, 4, 9, 5, 7, 3, 8,	9, 6, 1, 2, 0, 9, 4, 9, 5, 7, 3, 8,
6, 3, 4, 1, 2, 7, 4, 5, 1, 9, 9, 1, 1,	8, 8, 3, 4, 8, 4, 7, 2, 6, 5, 8, 1,	8, 8, 3, 4, 8, 4, 7, 2, 6, 5, 8, 1,
4, 3, 8, 8, 8, 3, 0, 3, 6, 1, 9, 6, 8,	0, 4, 5, 3, 8, 1, 5, 9, 2, 0, 2, 4,	0, 4, 5, 3, 8, 1, 5, 9, 2, 0, 2, 4,
7, 4, 1, 9, 6, 6, 9, 8, 8, 5, 2, 9, 7,	3, 7, 8, 0, 0, 1, 8, 6, 1, 6, 3, 4,	3, 7, 8, 0, 0, 1, 8, 6, 1, 6, 3, 4,
9, 4, 6, 7, 0, 7, 6, 3, 9, 2, 4, 2, 8,	1, 1, 6, 5, 3, 5, 2, 3, 2, 5, 4, 7,	1, 1, 6, 5, 3, 5, 2, 3, 2, 5, 4, 7,
9, 2, 3, 2, 1, 0, 2, 4, 0, 7, 7, 4, 5,	5, 4, 1, 4, 5, 2, 9, 6, 3, 4, 1, 2,	5, 4, 1, 4, 5, 2, 9, 6, 3, 4, 1, 2,
1, 8, 9, 3, 8, 6, 7, 7, 3, 3, 5, 4, 8,	7, 4, 5, 1, 9, 9, 1, 1, 4, 3, 8, 8,	7, 4, 5, 1, 9, 9, 1, 1, 4, 3, 8, 8,
7, 3, 4, 7, 4, 4, 5, 1, 1, 1, 5, 0, 9,	8, 3, 0, 3, 6, 1, 9, 6, 8, 7, 4, 1,	8, 3, 0, 3, 6, 1, 9, 6, 8, 7, 4, 1,
6, 4, 5, 8, 9, 8, 7, 8, 6, 3, 4, 8, 9,	9, 6, 6, 9, 8, 8, 5, 2, 9, 7, 9, 4,	9, 6, 6, 9, 8, 8, 5, 2, 9, 7, 9, 4,
5, 9, 1, 3, 0, 1, 0, 3, 9, 6, 4, 4, 2,	6, 7, 0, 7, 6, 3, 9, 2, 4, 2, 8, 9,	6, 7, 0, 7, 6, 3, 9, 2, 4, 2, 8, 9,
4, 8, 8, 8, 6, 0, 1, 1, 0, 9, 1, 9, 5,	2, 3, 2, 1, 0, 2, 4, 0, 7, 7, 4, 5,	2, 3, 2, 1, 0, 2, 4, 0, 7, 7, 4, 5,
7, 0, 9, 5, 8, 1, 0, 9, 9, 1, 4, 5, 3,	1, 8, 9, 3, 8, 6, 7, 7, 3, 3, 5, 4,	1, 8, 9, 3, 8, 6, 7, 7, 3, 3, 5, 4,
9, 0, 6, 6, 3, 5, 8, 0, 3, 8, 3, 9, 4,	8, 7, 3, 4, 7, 4, 4, 5, 1, 1, 1, 5,	8, 7, 3, 4, 7, 4, 4, 5, 1, 1, 1, 5,
8, 5, 7, 6, 6, 5, 3, 7, 7, 3, 6, 2, 6,	0, 9, 6, 4, 5, 8, 9, 8, 7, 8, 6, 3,	0, 9, 6, 4, 5, 8, 9, 8, 7, 8, 6, 3,
0, 2, 9, 4, 6, 0, 7, 6, 8, 1, 0, 3, 0,	4, 8, 9, 5, 9, 1, 3, 0, 1, 0, 3, 9,	4, 8, 9, 5, 9, 1, 3, 0, 1, 0, 3, 9,
3, 9, 0, 5, 4, 3, 4, 2, 4, 5, 4, 3, 9,	6, 4, 4, 2, 4, 8, 8, 8, 6, 0, 1, 1,	6, 4, 4, 2, 4, 8, 8, 8, 6, 0, 1, 1,
4, 4, 4, 4, 4, 8, 0, 0, 7, 7, 0, 1, 7,	0, 9, 1, 9, 5, 7, 0, 9, 5, 8, 1, 0,	0, 9, 1, 9, 5, 7, 0, 9, 5, 8, 1, 0,
8, 2, 5, 1, 7, 4, 3, 3, 6, 1, 8, 0, 4,	9, 9, 1, 4, 5, 3, 9, 0, 6, 6, 3, 5,	9, 9, 1, 4, 5, 3, 9, 0, 6, 6, 3, 5,
7, 0, 6, 8, 3, 6, 1, 6, 4, 8, 1, 5, 3,	8, 0, 3, 8, 3, 9, 4, 8, 5, 7, 6, 6,	8, 0, 3, 8, 3, 9, 4, 8, 5, 7, 6, 6,
0, 1, 7, 7, 8, 5, 8, 8, 2, 4, 7, 4, 2,	5, 3, 7, 7, 3, 6, 2, 6, 0, 2, 9, 4,	5, 3, 7, 7, 3, 6, 2, 6, 0, 2, 9, 4,
2, 5, 2, 3, 2, 5, 5, 2, 7, 5, 7, 9, 2,	6, 0, 7, 6, 8, 1, 0, 3, 0, 3, 9, 0,	6, 0, 7, 6, 8, 1, 0, 3, 0, 3, 9, 0,
2, 5, 8, 6, 9, 4, 9, 0, 3, 9, 7, 2, 7,	5, 4, 3, 4, 2, 4, 5, 4, 3, 9, 4, 4,	5, 4, 3, 4, 2, 4, 5, 4, 3, 9, 4, 4,
9, 3, 9, 0, 7, 0, 6, 3, 3, 6, 8, 1, 5,	4, 4, 4, 8, 0, 0, 7, 7, 0, 1, 7, 8,	4, 4, 4, 8, 0, 0, 7, 7, 0, 1, 7, 8,
0, 9, 4, 5, 1, 0, 1, 3, 9, 6, 2, 2, 5,	2, 5, 1, 7, 4, 3, 3, 6, 1, 8, 0, 4,	2, 5, 1, 7, 4, 3, 3, 6, 1, 8, 0, 4,
6, 4, 6, 3, 7, 7, 2, 9, 1, 5, 0, 0, 7,	7, 0, 6, 8, 3, 6, 1, 6, 4, 8, 1, 5,	7, 0, 6, 8, 3, 6, 1, 6, 4, 8, 1, 5,
6, 0, 4, 1, 3, 0, 5, 3, 0, 5, 4, 1, 3,	3, 0, 1, 7, 7, 8, 5, 8, 8, 2, 4, 7,	3, 0, 1, 7, 7, 8, 5, 8, 8, 2, 4, 7,
1, 8, 6, 9, 3, 9, 7, 7, 8, 2, 5, 5, 6,	4, 2, 2, 5, 2, 3, 2, 5, 5, 2, 7, 5,	4, 2, 2, 5, 2, 3, 2, 5, 5, 2, 7, 5,
0, 1, 8, 2, 4, 8, 8, 3, 3, 5, 5, 2, 1,	7, 9, 2, 2, 5, 8, 6, 9, 4, 9, 0, 3,	7, 9, 2, 2, 5, 8, 6, 9, 4, 9, 0, 3,
9, 4, 1, 1, 3, 7, 8, 7, 2, 8, 6, 2, 3,	9, 7, 2, 7, 9, 3, 9, 0, 7, 0, 6, 3,	9, 7, 2, 7, 9, 3, 9, 0, 7, 0, 6, 3,
3, 3, 5, 0, 3, 3, 9, 0, 7, 1, 9, 3, 3,	3, 6, 8, 1, 5, 0, 9, 4, 5, 1, 0, 1,	3, 6, 8, 1, 5, 0, 9, 4, 5, 1, 0, 1,
6, 5, 4, 1, 9, 3, 5, 8, 7, 7, 5, 3, 9,	3, 9, 6, 2, 2, 5, 6, 4, 6, 3, 7, 7,	3, 9, 6, 2, 2, 5, 6, 4, 6, 3, 7, 7,
9, 6, 2, 6, 7, 4, 1, 2, 0, 6, 5, 6, 0,	2, 9, 1, 5, 0, 0, 7, 6, 0, 4, 1, 3,	2, 9, 1, 5, 0, 0, 7, 6, 0, 4, 1, 3,
1, 1, 3, 4, 4, 0, 1, 2, 0, 8, 5, 9, 4,	0, 5, 3, 0, 5, 4, 1, 3, 1, 8, 6, 9,	0, 5, 3, 0, 5, 4, 1, 3, 1, 8, 6, 9,
9, 4, 0, 9, 4, 6, 2, 8, 0, 1, 9, 5, 4,	3, 9, 7, 7, 8, 2, 5, 5, 6, 0, 1, 8,	3, 9, 7, 7, 8, 2, 5, 5, 6, 0, 1, 8,
4, 4, 2, 9, 4, 5, 9, 9, 4, 3, 6, 4, 0,	2, 4, 8, 8, 3, 3, 5, 5, 2, 1, 9, 4,	2, 4, 8, 8, 3, 3, 5, 5, 2, 1, 9, 4,
4, 1, 9, 0, 3, 0, 9, 3, 9, 2, 6, 0, 6,	1, 1, 3, 7, 8, 7, 2, 8, 6, 2, 3, 3,	1, 1, 3, 7, 8, 7, 2, 8, 6, 2, 3, 3,
2, 9, 4, 6, 1, 2, 5, 5, 5, 2, 7, 4, 1,	3, 5, 0, 3, 3, 9, 0, 7, 1, 9, 3, 3,	3, 5, 0, 3, 3, 9, 0, 7, 1, 9, 3, 3,
1, 0, 2, 1, 5, 0, 0, 9, 1, 2, 7, 9, 4,	6, 5, 4, 1, 9, 3, 5, 8, 7, 7, 5, 3,	6, 5, 4, 1, 9, 3, 5, 8, 7, 7, 5, 3,
7, 2, 6, 6, 7, 1, 8, 6, 0, 3, 9, 0, 4,	9, 9, 6, 2, 6, 7, 4, 1, 2, 0, 6, 5,	9, 9, 6, 2, 6, 7, 4, 1, 2, 0, 6, 5,
4, 2, 8, 7, 5, 8, 9, 7, 0, 4, 2, 8, 2,	6, 0, 1, 1, 3, 4, 4, 0, 1, 2, 0, 8,	6, 0, 1, 1, 3, 4, 4, 0, 1, 2, 0, 8,
6, 1, 9, 1, 7, 9, 2, 1, 9, 1, 3, 1, 8,	5, 9, 4, 9, 4, 0, 9, 4, 6, 2, 8, 0,	5, 9, 4, 9, 4, 0, 9, 4, 6, 2, 8, 0,
0, 7, 0, 5, 7, 6, 3, 3, 1, 3, 6, 3, 6,	1, 9, 5, 4, 4, 4, 2, 9, 4, 5, 9, 9,	1, 9, 5, 4, 4, 4, 2, 9, 4, 5, 9, 9,
7, 0, 1, 3, 9, 0, 4, 9, 9, 2, 5, 3, 0,	4, 3, 6, 4, 0, 4, 1, 9, 0, 3, 0, 9,	4, 3, 6, 4, 0, 4, 1, 9, 0, 3, 0, 9,
1, 6, 6, 4, 1, 2,snip 0, 0,	3, 9, 2, 6, 0, 6, 2, 9, 4, 6, 1, 2,	3, 9, 2, 6, 0, 6, 2, 9, 4, 6, 1, 2,
3, 6, 3, 9, 9, 7, 5, 9, 9, 7, 7, 6, 8,	5, 5, 5, 2, 7, 4, 1, 1, 0, 2, 1, 5,	5, 5, 5, 2, 7, 4, 1, 1, 0, 2, 1, 5,
1, 7, 8, 5, 2, 8, 9, 2, 6, 0, 8, 6, 4,	0, 0, 9, 1, 2, 7, 9, 4, 7, 2, 6, 6,	0, 0, 9, 1, 2, 7, 9, 4, 7, 2, 6, 6,
5, 4, 1, 6, 1, 8, 1, 8, 3, 1, 7, 0, 3,	7, 1, 8, 6, 0, 3, 9, 0, 4, 4, 2, 8,	7, 1, 8, 6, 0, 3, 9, 0, 4, 4, 2, 8,
8, 4, 5, 8, 4, 8, 1, 1, 2, 1, 9, 4, 2,	7, 5, 8, 9, 7, 0, 4, 2, 8, 2, 6, 1,	7, 5, 8, 9, 7, 0, 4, 2, 8, 2, 6, 1,
4, 7, 4, 8, 7, 1, 7, 4, 9, 7, 1, 5, 4,		9, 1, 7, 9, 2, 1, 9, 1, 3, 1, 8, 0,
6, 4, 9, 6, 8, 6, 8, 4, 2, 9, 2, 3, 7,		7, 0, 5, 7, 6, 3, 3, 1, 3, 6, 3, 6,
	7, 0, 1, 3, 9, 0, 4, 9, 9, 2, 5, 3,	7, 0, 1, 3, 9, 0, 4, 9, 9, 2, 5, 3,
0, 6, 4, 3, 8, 0, 8, 0, 0, 7, 9, 2, 8,		
	0, 1, 6, 6, 4, 1, 2, 6, 3, 1, 7,	0, 1, 6, 6, 4, 1, 2, 6, 3, 1, 7,
7, 2, 7, 5, 3, 7, 8, 0, 9, 0, 9, 6, 2,	0, 1, 6, 6, 4, 1, 2, 6, 3, 1, 7,snip 9, 9, 9, 0, 7, 8, 9, 6,	0, 1, 6, 6, 4, 1, 2, 6, 3, 1, 7,snip 9, 9, 9, 0, 7, 8, 9, 6,
0, 6, 4, 3, 8, 0, 8, 0, 0, 7, 9, 2, 8, 7, 2, 7, 5, 3, 7, 8, 0, 9, 0, 9, 6, 2, 5, 8, 6, 7, 3, 3, 5, 4, 0, 6, 5, 0, 6, 3, 7, 6, 9, 7, 2, 4, 8, 6, 8, 8, 6, 8,	snip 9, 9, 9, 0, 7, 8, 9, 6,	

Test	Expected	Got
2, 3, 1, 6, 1, 2, 8, 4, 1, 9, 4, 7, 8,	8, 9, 0, 7, 7, 2, 7, 8, 9, 6, 6, 7,	8, 9, 0, 7, 7, 2, 7, 8, 9, 6, 6, 7,
7, 4, 3, 6, 1, 3, 8, 7, 4, 0, 2, 8, 2,	9, 5, 9, 0, 0, 5, 8, 8, 9, 9, 0, 4,	9, 5, 9, 0, 0, 5, 8, 8, 9, 9, 0, 4,
4, 7, 7, 6, 6, 2, 3, 9, 5, 0, 7, 6, 0,	7, 9, 5, 5, 6, 6, 6, 9, 3, 3, 3, 6,	7, 9, 5, 5, 6, 6, 6, 9, 3, 3, 3, 6,
9, 1, 3, 1, 6, 5, 8, 3, 9, 9, 8, 6, 1,	9, 9, 0, 0, 9, 9, 0, 0, 8, 8, 8, 9,	9, 9, 0, 0, 9, 9, 0, 0, 8, 8, 8, 9,
8, 2, 8, 2, 9, 8, 6, 7, 8, 4, 5, 3, 6,	7, 8, 9, 8, 8, 9, 0, 6, 8, 8, 9, 8,	7, 8, 9, 8, 8, 9, 0, 6, 8, 8, 9, 8,
	5, 6, 6, 6, 8, 8, 9, 8, 9, 7, 7, 8,	5, 6, 6, 6, 8, 8, 9, 8, 9, 7, 7, 8,
	3, 8, 9, 5, 8, 9, 8, 9, 2, 2, 9, 9,	3, 8, 9, 5, 8, 9, 8, 9, 2, 2, 9, 9,
	0, 7, 4, 7, 8, 8, 9, 9, 7, 9, 9, 0,	0, 7, 4, 7, 8, 8, 9, 9, 7, 9, 9, 0,
	9, 5, 6, 6, 9, 9, 0, 8, 9, 8, 9, 9,	9, 5, 6, 6, 9, 9, 0, 8, 9, 8, 9, 9,
	9, 0, 3, 7, 8, 6, 8, 8, 8, 9, 8, 9,	9, 0, 3, 7, 8, 6, 8, 8, 8, 9, 8, 9,
	7, 7, 9, 0, 8, 9, 8, 7, 8, 7, 7, 8,	7, 7, 9, 0, 8, 9, 8, 7, 8, 7, 7, 8,
	9, 9, 0, 9, 0, 8, 5, 8, 9, 7, 9, 5,	9, 9, 0, 9, 0, 8, 5, 8, 9, 7, 9, 5,
	5, 6, 6, 6, 7, 6, 6, 7, 7, 9, 9, 0,	5, 6, 6, 6, 7, 6, 6, 7, 7, 9, 9, 0,
	8, 4, 8, 9, 8, 9, 9, 8, 9, 2, 6, 7,	8, 4, 8, 9, 8, 9, 9, 8, 9, 2, 6, 7,
	4, 3, 3, 4, 5, 7, 8, 8, 7, 8, 3, 6,	4, 3, 3, 4, 5, 7, 8, 8, 7, 8, 3, 6,
	6, 8, 2, 8, 9, 9, 9, 0, 7, 8, 9, 8,	6, 8, 2, 8, 9, 9, 9, 0, 7, 8, 9, 8,
	6, 6, 8, 3, 8, 9, 8, 8, 2, 8, 9, 4,	6, 6, 8, 3, 8, 9, 8, 8, 2, 8, 9, 4,
	7, 9, 9, 9, 9, 3, 9, 0, 7, 7, 9, 9,	7, 9, 9, 9, 9, 3, 9, 0, 7, 7, 9, 9,
	9, 0, 3, 6, 6, 8, 8, 9, 9, 0, 0, 9,	9, 0, 3, 6, 6, 8, 8, 9, 9, 0, 0, 9,
	8, 8, 9, 8, 9, 9, 0, 9, 7, 8, 9, 5,	8, 8, 9, 8, 9, 9, 0, 9, 7, 8, 9, 5,
	6, 6, 9, 1, 9, 0, 9, 4, 9, 9, 0, 9,	6, 6, 9, 1, 9, 0, 9, 4, 9, 9, 0, 9,
	9, 0, 9, 0, 8, 8, 8, 8, 8, 9, 9, 9,	9, 0, 9, 0, 8, 8, 8, 8, 8, 9, 9, 9,
	3, 9, 9, 0, 7, 8, 6, 8, 3, 8, 9, 9,	3, 9, 9, 0, 7, 8, 6, 8, 3, 8, 9, 9,
	6, 3, 6, 9, 0, 9, 0, 8, 8, 6, 8, 9,	6, 3, 6, 9, 0, 9, 0, 8, 8, 6, 8, 9,
	6, 8, 4, 2, 2, 4, 8, 9, 6, 7, 7, 6,	6, 8, 4, 2, 2, 4, 8, 9, 6, 7, 7, 6,
	4, 6, 6, 7, 5, 5, 7, 5, 7, 7, 8, 4,	4, 6, 6, 7, 5, 5, 7, 5, 7, 7, 8, 4,
3, 1, 3, 5, 2, 6, 8, 1, 2, 0, 7, 3, 2,	7, 8, 8, 7, 7, 7, 8, 4, 6, 6, 8, 3,	7, 8, 8, 7, 7, 7, 8, 4, 6, 6, 8, 3,
5, 6, 8, 8, 8, 1, 3, 9, 1, 8, 5, 4, 3,	8, 8, 9, 9, 7, 9, 0, 7, 9, 2, 9, 9,	8, 8, 9, 9, 7, 9, 0, 7, 9, 2, 9, 9,
6, 9, 3, 0, 4, 4, 9, 7, 0, 4, 6, 9, 4,	0, 9, 0, 3, 7, 7, 8, 9, 4, 6, 8, 8,	0, 9, 0, 3, 7, 7, 8, 9, 4, 6, 8, 8,
9, 3, 2, 3, 8, 0, 5, 3, 7, 1, 1, 7, 4,	4, 5, 5, 8, 8, 9, 9, 0, 6, 6, 9, 0,	4, 5, 5, 8, 8, 9, 9, 0, 6, 6, 9, 0,
5, 2, 1, 6, 5, 9, 5, 0, 3, 0, 9, 4, 1,	8, 9, 7, 7, 8, 8, 9, 6, 6, 6, 9, 3,	8, 9, 7, 7, 8, 8, 9, 6, 6, 6, 9, 3,
4, 8, 8, 5, 6, 9, 5, 4, 9, 2, 4, 7, 7,	9, 0, 9, 0, 8, 8, 9, 7, 7, 9, 9, 0,	9, 0, 9, 0, 8, 8, 9, 7, 7, 9, 9, 0,
3, 2, 9, 3, 3, 5, 2, 2, 7, 9, 0, 5, 0,	9, 0, 5, 5, 7, 9, 5, 6, 6, 9, 6, 3,	9, 0, 5, 5, 7, 9, 5, 6, 6, 9, 6, 3,
2, 1, 3, 9, 2, 9, 8, 0, 3, 1, 6, 1, 4,	4, 6, 9, 6, 9, 9, 0, 0, 0, 7, 7, 8,	4, 6, 9, 6, 9, 9, 0, 0, 0, 7, 7, 8,
4, 7, 1, 7, 2, 3, 6, 0, 8, 7, 0, 9, 8,	8, 9, 0, 9, 2, 2, 6, 9, 6, 6, 9, 9,	8, 9, 0, 9, 2, 2, 6, 9, 6, 6, 9, 9,
4, 2, 6, 1, 7, 1, 9, 4, 8, 4, 9, 1, 1,	9, 0, 6, 7, 7, 8, 9, 8, 5, 8, 8, 9,	9, 0, 6, 7, 7, 8, 9, 8, 5, 8, 8, 9,
0, 2, 9, 3, 6, 0, 7, 2, 5, 5, 6, 1, 9,	6, 7, 7, 9, 7, 7, 9, 9, 9, 0, 8, 9,	6, 7, 7, 9, 7, 7, 9, 9, 9, 0, 8, 9,
5, 0, 4, 1, 8, 4, 7, 5, 8, 2, 0, 4, 9,	7, 7, 8, 4, 4, 5, 5, 7, 8, 8, 8, 8,	7, 7, 8, 4, 4, 5, 5, 7, 8, 8, 8, 8,
8, 6, 4, 8, 8, 4, 9, 5, 3, 0, 5, 5, 0,	9, 9, 4, 6, 6, 9, 0, 9, 5, 9, 0, 4,	9, 9, 4, 6, 6, 9, 0, 9, 5, 9, 0, 4,
9, 2, 8, 1, 4, 7, 5, 4, 5, 5, 3, 5, 4,	4, 6, 6, 9, 9, 0, 9, 9, 0, 0, 6, 8,	4, 6, 6, 9, 9, 0, 9, 9, 0, 0, 6, 8,
7, 4, 6, 0, 9, 9, 1, 6, 1, 9, 4, 5, 8,	8, 2, 8, 8, 9, 8, 9, 7, 8, 7, 8, 8,	8, 2, 8, 8, 9, 8, 9, 7, 8, 7, 8, 8,
8, 6, 0, 7, 5, 8, 1, 5, 1, 5, 4, 9, 6,	8, 9, 7, 7, 7, 3, 3, 7, 9, 6, 5, 6,	8, 9, 7, 7, 7, 3, 3, 7, 9, 6, 5, 6,
2, 6, 4, 2, 7, 4, 9, 3, 7, 8, 2, 8, 5,	9, 6, 9, 4, 9, 9, 0, 7, 7, 8, 6, 8,	9, 6, 9, 4, 9, 9, 0, 7, 7, 8, 6, 8,
1, 3, 0, 7, 1, 0, 1, 8, 0, 0, 2, 0, 2,	5, 3, 5, 6, 6, 8, 9, 2, 7, 7, 8, 5,	5, 3, 5, 6, 6, 8, 9, 2, 7, 7, 8, 5,
9, 9, 3, 4, 5, 2, 2, 0, 6, 1, 6, 3, 4,	5, 6, 8, 9, 9, 9, 3, 9, 0, 8, 9, 6,	5, 6, 8, 9, 9, 9, 3, 9, 0, 8, 9, 6,
4, 0, 2, 3, 8, 8, 2, 8, 2, 3, 1, 3, 6,	6, 6, 9, 0, 4, 4, 9, 9, 0, 9, 4, 6,	6, 6, 9, 0, 4, 4, 9, 9, 0, 9, 4, 6,
9, 5, 3, 0, 2, 0, 0, 2, 5, 2, 7, 1, 3,	9, 0, 9, 0, 8, 3, 8, 9, 5, 7, 7, 9,	9, 0, 9, 0, 8, 3, 8, 9, 5, 7, 7, 9,
9, 2, 4, 5, 0, 8, 7, 9, 1, 4, 0, 7, 4,	7, 7, 9, 5, 6, 6, 6, 9, 9, 0, 9, 3,	7, 7, 9, 5, 6, 6, 6, 9, 9, 0, 9, 3,
6, 6, 1, 6, 5, 5, 6, 0, 9, 3, 9, 8, 2,	9, 9, 0, 8, 4, 8, 9, 9, 6, 9, 0, 9,	9, 9, 0, 8, 4, 8, 9, 9, 6, 9, 0, 9,
5, 3, 0, 6, 0, 7, 0, 7, 8, 4, 6, 3, 1,	9, 0, 4, 7, 9, 9, 9, 9, 0, 5, 5, 7,	9, 0, 4, 7, 9, 9, 9, 9, 0, 5, 5, 7,
2, 4, 6, 2, 1, 7, 3, 2, 4, 7, 1, 6, 7,	7, 7, 9, 0, 5, 9, 2, 3, 3, 9, 0, 9,	7, 7, 9, 0, 5, 9, 2, 3, 3, 9, 0, 9,
2, 6, 8, 2, 6, 4, 6, 8, 7, 9, 1, 9, 3,	0, 9, 3, 6, 6, 7, 4, 7, 7, 8, 7, 8,	0, 9, 3, 6, 6, 7, 4, 7, 7, 8, 7, 8,
6, 1, 3, 8, 5, 5, 8, 6, 2, 8, 6, 8, 8,	3, 6, 8, 8, 9, 9, 9, 0, 9, 6, 6, 7,	3, 6, 8, 8, 9, 9, 9, 0, 9, 6, 6, 7,
7, 6, 6, 6, 2, 8, 2, 5, 7, 7, 3, 7, 3,	7, 9, 9, 0, 8, 9, 9, 0, 2, 2, 2, 9,	7, 9, 9, 0, 8, 9, 9, 0, 2, 2, 2, 9,
6, 2, 4, 1, 5, 1, 1, 0, 6, 7, 3, 9, 7,	0, 6, 7, 7, 9, 5, 6, 6, 9, 9, 0, 8,	0, 6, 7, 7, 9, 5, 6, 6, 9, 9, 0, 8,
4, 4, 4, 8, 2, 8, 7, 1, 4, 7, 3, 2, 5,	4, 8, 8, 9, 7, 8, 8, 9, 4, 4, 9, 0,	4, 8, 8, 9, 7, 8, 8, 9, 4, 4, 9, 0,
2, 3, 2, 5, 6, 8, 7, 7, 2, 1, 1, 1, 0,	9, 8, 8, 9, 9, 9, 0, 9, 5, 5, 9, 9,	9, 8, 8, 9, 9, 9, 0, 9, 5, 5, 9, 9,
	9, 0, 8, 9, 4, 7, 9, 7, 5, 7, 7, 5,	9, 0, 8, 9, 4, 7, 9, 7, 5, 7, 7, 5,
	7, 7, 9, 6, 9, 9, 0, 0, 6, 9, 9, 0,	7, 7, 9, 6, 9, 9, 0, 0, 6, 9, 9, 0,
	5, 8, 9, 9, 7, 7, 8, 8, 9, 5, 9, 5,	5, 8, 9, 9, 7, 7, 8, 8, 9, 5, 9, 5,
	9, 9, 0, 7, 6, 7, 7, 7, 9, 9, 0, 7,	9, 9, 0, 7, 6, 7, 7, 7, 9, 9, 0, 7,
	8, 9, 8, 9, 7, 3, 7, 7, 8, 8, 1, 8,	8, 9, 8, 9, 7, 3, 7, 7, 8, 8, 1, 8,
1, 9, 5, 7, 9, 5, 6, 8, 3, 8, 7, 1, 6,		
	9, 2, 2, 9, 2, 9, 0, 0, 4, 5, 6, 6,	9, 2, 2, 9, 2, 9, 0, 0, 4, 5, 6, 6,
4, 2, 2, 1, 8, 5, 7, 5, 2, 0, 8, 5, 4,	9, 2, 2, 9, 2, 9, 0, 0, 4, 5, 6, 6, 6, 6, 8, 6, 8, 4, 8, 8, 2, 3, 8, 9,	9, 2, 2, 9, 2, 9, 0, 0, 4, 5, 6, 6, 6, 6, 6, 8, 6, 8, 4, 8, 8, 2, 3, 8, 9,

	Test	Expected	Got
	1, 5, 4, 9, 3, 2, 0, 9, 3, 6, 1, 3, 2, 5, 2, 5, 7, 2, 6, 8, 9, 4, 6, 2, 2, 2, 9, 3, 1, 1, 3, 8, 8, 9, 8, 0, 8, 9, 4, 6, 5, 0, 9, 6, 9, 8, 2, 4, 1, 8, 4, 5, 4, 6, 4, 3, 7, 5, 9, 1, 1, 9, 4, 5, 2, 6, 7, 8, 4, 7, 7, 6, 8, 7, 6, 5, 2, 7, 4, 2, 2, 2, 4, 3, 5, 3, 5, 2, 1, 0, 6, 0, 0, 4, 5, 1, 4, 3, 3, 9, 6, 4, 6, 0, 6, 4, 7, 0, 6, 2, 2, 2, 6, 0, 3, 3, 6, 7, 5, 3, 3, 1, 7, 0, 9, 7, 3, 0, 3, 3, 1, 9, 2, 9, 6, 7, 6, 1, 6, 2, 5, 5, 3, 9, 1, 8, 8, 1, 4, 2, 4, 4, 1, 2, 7, 5, 0, 7, 9, 7, 8, 6, 4, 2, 6, 9, 3, 3, 0, 6, 8, 8, 1, 8, 2, 1, 9, 7, 4, 1, 5, 9, 8, 1, 7, 5, 1, 1, 6, 2, 7, 9, 6, 4, 1, 6, 0, 8, 0, 3, 2, 3, 9, 3, 8, 9, 2, 5, 7, 1, 5, 6, 9, 4, 3, 9, 1, 0, 8, 8, 4, 0, 0, 8, 9, 5, 3, 5, 8, 4, 7, 3, 6, 7, 6, 2, 2, 4, 4, 0, 3, 8, 4, 5, 2, 3, 2, 3, 5, 8, 6, 6, 9, 3, 9, 7, 4, 5, 3, 9, 6, 4, 2, 0, 0, 1, 6, 1, 3, 1, 1, 0, 4, 1, 6, 5};  LLNode* head =  LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int));  LLNode* newhead =  replaceFirstGreater(head);  LLNode*:printList(head);  cout << "\n";  LLNode* newhead =  replaceFirstGreater(head);  LLNode::printList(newhead);	5, 2, 2, 5, 7, 7, 9, 3, 9, 0, 4, 5, 8, 8, 9, 9, 0, 4, 7, 7, 9, 6, 9, 9, 6, 9, 6, 6, 6, 6, 9, 9, 0, 9, 0, 9, 5, 6, 6, 6, 7, 7, 8, 7, 8, 9, 6, 7, 4, 2, 4, 6, 7, 7, 7, 8, 6, 8, 9, 9, 0, 9, 0, 9, 0, 6, 8, 3, 8, 9, 8, 8, 9, 8, 8, 9, 8, 8, 9, 8, 8, 9, 8, 8, 9, 8, 8, 9, 8, 8, 9, 8, 8, 9, 8, 8, 8, 8, 8, 8, 9, 5, 7, 9, 9, 7, 9, 6, 7, 4, 5, 5, 6, 6, 6, 6, 6, 7, 9, 9, 0, 8, 8, 8, 8, 8, 9, 8, 9, 8, 4, 7, 8, 5, 5, 6, 3, 5, 5, 6, 8, 9, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8,	5, 2, 2, 5, 7, 7, 9, 3, 9, 0, 4, 5, 8, 8, 9, 9, 0, 4, 7, 7, 9, 6, 9, 9, 6, 9, 6, 6, 6, 9, 9, 0, 9, 0, 9, 5, 6, 6, 6, 7, 7, 8, 7, 8, 9, 6, 7, 4, 2, 4, 6, 7, 7, 7, 8, 4, 4, 7, 8, 6, 7, 8, 6, 8, 9, 6, 8, 8, 9, 9, 0, 9, 0, 6, 8, 3, 8, 9, 8, 8, 9, 8, 8, 9, 8, 8, 9, 8, 8, 9, 8, 8, 9, 8, 8, 9, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8,
*	int arr[] = {3, 5, 1, 7, 7, 4, 0, 1, 8, 6, 1, 4, 7, 1, 4, 6, 2, 4, 9, 7, 2, 5, 6, 2, 9, 4, 4, 7, 6, 3, 0, 3, 8, 0, 1, 1, 1, 8, 4, 1, 7, 4, 3, 8, 2, 0, 8, 6, 5, 2, 2, 0, 0, 9, 7, 2, 1, 5, 3, 4, 8, 4, 7, 1, 8, 1, 9, 7, 5, 2, 4, 4, 3, 3, 4, 8, 3, 0, 2, 0, 7, 7, 0, 0, 7, 7, 9, 4, 1, 7, 3, 0, 4, 0, 6, 3, 3, 6, 8, 0, 0, 5, 1, 7, 8, 7, 7, 4, 8, 7, 7, 5, 8, 7, 1, 1, 5, 0, 5, 8, 2, 5, 9, 8, 4, 1, 6, 4, 0, 5, 5, 4, 6, 3, 0, 3, 0, 4, 1, 1, 7, 2, 2, 6, 4, 7, 0, 2, 9, 8, 5, 9, 1, 0, 0, 7, 9, 3, 7, 3, 9, 1, 5, 1, 6, 2, 9, 1, 5, 0, 5, 9, 0, 1, 4, 7, 9, 1, 6, 4, 2, 3, 6, 0, 2, 6, 9, 3, 3, 6, 2, 4, 0, 6, 9, 4, 3, 1, 0, 3, 9, 0, 7, 5, 9, 2, 8, 8, 9, 3, 1, 7, 6, 0, 0, 7, 9, 1, 5, 2, 1, 8, 9, 2, 8, 9, 2, 0, 5, 8, 2, 1, 0, 9, 4, 0, 9, 8, 9, 0, 6, 6, 5, 0, 9, 0, 2, 5, 9, 4, 7, 9, 9, 7, 4, 2, 2, 4, 3, 3, 8, 0, 3, 8, 4, 9, 3, 1,	8, 4, 7, 1, 8, 1, 9, 7, 5, 2, 4, 4, 3, 3, 4, 8, 3, 0, 2, 0, 7, 7, 0, 0, 7, 7, 9, 4, 1, 7, 3, 0, 4, 0, 6, 3, 3, 6, 8, 0, 0, 5, 1, 7, 8, 7, 7, 4, 8, 7, 7, 5, 8, 7, 1, 1, 5, 0, 5, 8, 2, 5, 9, 8, 4, 1, 6, 4, 0, 5, 5, 4, 6, 3, 0, 3, 0, 4, 1, 1, 7, 2, 2, 6, 4, 7, 0, 2, 9, 8, 5, 9, 1, 0, 0, 7, 9, 3, 7, 3, 9, 1, 5, 1, 6, 2, 9, 1, 5, 0, 5, 9, 0, 1, 4, 7, 9, 1, 6, 4, 2, 3, 6, 0, 2, 6, 9, 3, 3, 6, 2, 4, 0, 6, 9, 4, 3, 1, 0, 3, 9, 0, 7, 5, 9, 2, 8, 8, 9, 3, 1, 7, 6, 0, 0, 7, 9, 1, 5, 2, 1, 8, 9, 2, 8, 9, 2, 0, 5, 8, 2, 1, 0, 9, 4, 0, 9, 8, 9, 0,	[3, 5, 1, 7, 7, 4, 0, 1, 8, 6, 1, 4, 7, 1, 4, 6, 2, 4, 9, 7, 2, 5, 6, 2, 9, 4, 4, 7, 6, 3, 0, 3, 8, 0, 1, 1, 1, 8, 4, 1, 7, 4, 3, 8, 2, 0, 8, 6, 5, 2, 2, 0, 0, 9, 7, 2, 1, 5, 3, 4, 8, 4, 7, 1, 8, 1, 9, 7, 5, 2, 4, 4, 3, 3, 4, 8, 3, 0, 2, 0, 7, 7, 0, 0, 7, 7, 9, 4, 1, 7, 3, 0, 4, 0, 6, 3, 3, 6, 8, 0, 0, 5, 1, 7, 8, 7, 7, 4, 8, 7, 7, 5, 8, 7, 1, 1, 5, 0, 5, 8, 2, 5, 9, 8, 4, 1, 6, 4, 0, 5, 5, 4, 6, 3, 0, 3, 0, 4, 1, 1, 7, 2, 2, 6, 4, 7, 0, 2, 9, 8, 5, 9, 1, 0, 0, 7, 9, 3, 7, 3, 9, 1, 5, 1, 6, 2, 9, 1, 5, 0, 5, 9, 0, 1, 4, 7, 9, 1, 6, 4, 2, 3, 6, 0, 2, 6, 9, 3, 3, 6, 2, 4, 0, 6, 9, 4, 3, 1, 0, 3, 9, 0, 7, 5, 9, 2, 8, 8, 9, 3, 1, 7, 6, 0, 0, 7, 9, 1, 5, 2, 1, 8, 9, 2, 8, 9, 2, 0, 5, 8, 2, 1, 0, 9, 4, 0, 9, 8, 9, 0, 6, 6, 5, 0, 9, 0, 2, 5, 9, 4, 7, 9,

Test	E	Expected	Got
4, 5, 4, 8, 6, 8, 4, 4,	0, 7, 5, 5, 3, 9	9, 7, 4, 2, 2, 4, 3, 3, 8, 6	9, 3, 8, 9, 7, 4, 2, 2, 4, 3, 3, 8, 0, 3, 8,
2, 5, 9, 0, 5, 0, 8, 6,	3, 6, 8, 1, 5, 4	1, 9, 3, 1, 4, 5, 4, 8, 6, 8	8, 4, 4, 4, 9, 3, 1, 4, 5, 4, 8, 6, 8, 4, 4,
2, 9, 9, 4, 9, 0, 8, 3	, 4, 5, 5, 1, 6,	0, 7, 5, 5, 3, 2, 5, 9, 0, 5	5, 0, 8, 0, 7, 5, 5, 3, 2, 5, 9, 0, 5, 0, 8,
7, 8, 3, 1, 5, 5, 2, 4		5, 3, 6, 8, 1, 5, 2, 9, 9, 4	
9, 9, 4, 7, 3, 3, 5, 8		3, 3, 4, 5, 5, 1, 6, 7, 8, 3	
3, 3, 6, 2, 2, 0, 2, 5,		5, 2, 4, 4, 0, 2, 8, 0, 9, 9	
0, 1, 3, 5, 3, 7, 7, 2,		3, 3, 5, 8, 2, 3, 3, 9, 5, 3	
0, 7, 4, 4, 2, 1, 4, 4,		2, 2, 0, 2, 5, 5, 1, 2, 2, 7	
0, 5, 5, 1, 8, 4, 0, 1,		3, 5, 3, 7, 7, 2, 4, 9, 0, 1	
2, 5, 1, 3, 9, 5, 6, 2,		7, 4, 4, 2, 1, 4, 4, 9, 5, 4	
4, 4, 7, 8, 9, 3, 3, 7,		0, 5, 5, 1, 8, 4, 0, 1, 8, 7	
8, 6, 8, 3, 0, 2, 5, 0,	7, 6, 9, 8, 4, 6	5, 2, 5, 1, 3, 9, 5, 6, 2, 5	
5, 3, 4, 0, 0, 5, 6, 6,	1, 6, 1, 1, 8, 8	3, 8, 4, 4, 7, 8, 9, 3, 3, 7	8, 8, 4, 4, 7, 8, 9, 3, 3, 7, 4, 4,
7, 4, 9, 1, 6, 9, 9, 7	8, 8, 2, 5, 0, 1	1, 0, 0, 8, 6, 8, 3, 0, 2, 5	1, 0, 0, 8, 6, 8, 3, 0, 2, 5, 0, 7,
1, 2, 7, 6, 2, 1, 8, 2,	6, 2, 2, 9, 7, 6	5, 9, 8, 4, 5, 3, 4, 0, 0, 5	6, 6, 6, 6, 6, 8, 4, 5, 3, 4, 0, 0, 5, 6, 6,
8, 2, 6, 2, 1, 1, 8, 4,	7, 8, 5, 2, 5, 1	1, 6, 1, 1, 8, 7, 4, 9, 1, 6	5, 9, 9, 1, 6, 1, 1, 8, 7, 4, 9, 1, 6, 9, 9,
4, 2, 9, 2, 3, 8, 7, 5,	6, 6, 0, 2, 9, 7	7, 8, 8, 2, 5, 0, 1, 2, 7, 6	5, 2, 1, 7, 8, 8, 2, 5, 0, 1, 2, 7, 6, 2, 1,
5, 6, 8, 6, 6, 4, 8, 3	, 4, 1, 8, 8, 7, 8	3, 2, 6, 2, 2, 9, 7, 8, 2, 6	5, 2, 1, 8, 2, 6, 2, 2, 9, 7, 8, 2, 6, 2, 1,
9, 3, 8, 1, 1, 8, 3, 8		1, 8, 4, 7, 8, 5, 2, 5, 4, 2	
5, 9, 5, 9, 7, 6, 6, 3		3, 8, 7, 5, 6, 6, 0, 2, 9, 5	
4, 8, 1, 7, 7, 3, 4, 2,		5, 6, 4, 8, 3, 4, 1, 8, 8, 7	
0, 5, 5, 6, 9, 7, 8, 0,		3, 1, 1, 8, 3, 8, 1, 8, 8, 7	
4, 9, 7, 9, 1, 1, 4, 5,		9, 5, 9, 7, 6, 6, 3, 9, 6, 3	
0, 8, 6, 8, 0, 6, 7, 0,		1, 8, 1, 7, 7, 3, 4, 2, 1, 2	
2, 9, 1, 5, 2, 9, 6, 9,		7, 0, 5, 5, 6, 9, 7, 8, 0, 6	
5, 6, 0, 2, 2, 7, 1, 1,	0, 3, 7, 0, 7, 2	2, 3, 4, 9, 7, 9, 1, 1, 4, 5	2, 3, 4, 9, 7, 9, 1, 1, 4, 5, 8, 4,
5, 2, 8, 7, 0, 6, 7, 5	8, 7, 8, 0, 6, 8	3, 5, 6, 0, 8, 6, 8, 0, 6, 7	7, 0, 6, 8, 5, 6, 0, 8, 6, 8, 0, 6, 7, 0, 6,
1, 2, 2, 0, 0, 4, 2, 0,	0, 3, 5, 8, 3, 1	l, 1, 6, 8, 2, 9, 1, 5, 2, 9	1, 1, 6, 8, 2, 9, 1, 5, 2, 9, 6, 9,
1, 2, 2, 2, 7, 8, 2, 5,	5, 3, 6, 3, 4, 1	1, 8, 0, 5, 2, 5, 6, 0, 2, 2	1, 7, 1, 1, 8, 0, 5, 2, 5, 6, 0, 2, 2, 7, 1,
9, 3, 4, 7, 1, 5, 5, 2,	4, 2, 4, 1, 0, 1	1, 0, 3, 7, 0, 7, 5, 2, 8, 7	7, 0, 6, 1, 0, 3, 7, 0, 7, 5, 2, 8, 7, 0, 6,
8, 8, 2, 3, 6, 8, 1, 2,	0, 0, 8, 7, 5, 7	7, 5, 8, 7, 8, 0, 6, 1, 2, 2	2, 0, 0, 7, 5, 8, 7, 8, 0, 6, 1, 2, 2, 0, 0,
7, 4, 6, 4, 5, 2, 0, 3	, 2, 9, 0, 2, 3, 4	4, 2, 0, 0, 3, 5, 8, 3, 1, 2	2, 2, 2, 4, 2, 0, 0, 3, 5, 8, 3, 1, 2, 2, 2,
6, 0, 9, 8, 9, 2, 5, 5,	0, 1, 6, 8, 9, 7	7, 8, 2, 5, 5, 3, 6, 3, 4, 9	7, 8, 2, 5, 5, 3, 6, 3, 4, 9, 3, 4,
5, 2, 9, 3, 6, 5, 6, 5,	, 2, 9, 1, 3, 0, 7	7, 1, 5, 5, 2, 4, 2, 4, 1, 6	0, 8, 8, 7, 1, 5, 5, 2, 4, 2, 4, 1, 0, 8, 8,
2, 4, 2, 3, 7, 8, 2, 0,	2, 5, 4, 2, 0, 2	2, 3, 6, 8, 1, 2, 0, 0, 8, 7	', 5, 7, 2, 3, 6, 8, 1, 2, 0, 0, 8, 7, 5, 7,
9, 9, 1, 0, 7, 1, 6, 7		1, 6, 4, 5, 2, 0, 3, 2, 9, 6	
0, 9, 3, 8, 7, 6, 3, 5		5, 0, 9, 8, 9, 2, 5, 5, 0, 1	
9, 2, 1, 7, 4, 2, 9, 1,		9, 5, 2, 9, 3, 6, 5, 6, 5, 2	
4, 7, 4, 9, 1, 9, 4, 0,		3, 0, 2, 4, 2, 3, 7, 8, 2, 6	
1, 6, 4, 1, 1, 7, 3, 8,		1, 2, 0, 9, 9, 1, 0, 7, 1, 6	
		0, 8, 4, 2, 0, 9, 3, 8, 7, 6	
7, 6, 6, 4, 7, 8, 1, 6,			
6, 7, 0, 8, 5, 2, 3, 2,		1, 5, 3, 4, 8, 9, 2, 1, 7, 4	
9, 2, 2, 4, 9, 8, 8, 8,		1, 3, 8, 9, 2, 9, 4, 7, 4, 9	
8, 1, 1, 3, 6, 4, 5, 6,		1, 0, 9, 2, 8, 5, 2, 1, 6, 4	
5, 7, 3, 2, 6, 1, 3, 2,		7, 3, 8, 4, 6, 3, 8, 8, 7, 6	
7, 5, 9, 0, 9, 5, 8, 6,	3, 2, 6, 5, 3, 7	7, 8, 1, 6, 5, 1, 3, 0, 2, 6	5, 7, 0, 7, 8, 1, 6, 5, 1, 3, 0, 2, 6, 7, 0,
3, 9, 2, 5, 4, 4, 2, 6	3, 7, 2, 7, 7, 8	3, 5, 2, 3, 2, 0, 2, 2, 7, 6	5, 9, 2, 8, 5, 2, 3, 2, 0, 2, 2, 7, 6, 9, 2,
6, 6, 6, 5, 8, 4, 2, 5	1, 7, 3, 4, 1, 2	2, 4, 9, 8, 8, 8, 2, 2, 6, 2	2, 4, 9, 8, 8, 8, 2, 2, 6, 2, 7, 8,
8, 5, 1, 6, 9, 0, 7, 8	2, 6, 8, 9, 5, 1	l, 1, 3, 6, 4, 5, 6, 7, 6, 6	5, 3, 1, 1, 1, 3, 6, 4, 5, 6, 7, 6, 6, 3, 1,
2, 1, 8, 9, 6, 4, 0, 5	8, 1, 0, 0, 2,	5, 7, 3, 2, 6, 1, 3, 2, 1, 3	5, 0, 3, 5, 7, 3, 2, 6, 1, 3, 2, 1, 3, 0, 3,
9, 9, 3, 4, 4, 9, 1, 8,	3, 1, 8, 2, 5, 8	3, 7, 5, 9, 0, 9, 5, 8, 6, 3	8, 2, 6, 8, 7, 5, 9, 0, 9, 5, 8, 6, 3, 2, 6,
3, 9, 3, 3, 8, 2, 9, 3,	0, 8, 6, 1, 5,	5, 3, 3, 9, 2, 5, 4, 4, 2, 6	5, 3, 7, 5, 3, 3, 9, 2, 5, 4, 4, 2, 6, 3, 7,
2, 5, 0, 4, 8, 9, 9, 4,		2, 7, 7, 6, 6, 6, 5, 8, 4, 2	
4, 4, 9, 2, 0, 2, 3, 3,		7, 3, 4, 1, 8, 5, 1, 6, 9, 6	
4, 5, 4, 3, 3, 8, 1, 5,		2, 6, 8, 9, 5, 2, 1, 8, 9, 6	
0, 8, 7, 1, 1, 5, 3, 5,	.	5, 8, 1, 0, 0, 2, 9, 9, 3, 4	
2, 1, 3, 6, 8, 8, 8, 5,		1, 8, 3, 1, 8, 2, 5, 3, 9, 3	
4, 8, 7, 0, 2, 0, 0, 3,		2, 9, 3, 0, 8, 6, 1, 5, 2, 5	
1, 0, 9, 1, 6, 8, 2, 6,		3, 9, 9, 4, 2, 9, 3, 9, 1, 4	
9, 8, 3, 4, 4, 4, 7, 1,		2, 0, 2, 3, 3, 9, 6, 4, 3, 9	
1, 8, 9, 5, 9, 8, 1, 2,		1, 3, 3, 8, 1, 5, 4, 9, 2, 2	
8, 6, 1, 6, 9, 0, 4, 1,	, 8, 0, 2, 4, 5, 8	3, 7, 1, 1, 5, 3, 5, 8, 1, 3	8, 5, 5, 8, 7, 1, 1, 5, 3, 5, 8, 1, 3, 5, 5,
3, 5, 2, 0, 4, 9, 7, 5,		2, 1, 3, 6, 8, 8, 8, 5, 5, 3	
	4, 2, 1, 7, 8, 2	2, 1, 3, 6, 8, 8, 8, 5, 5, 3 8, 4, 8, 7, 0, 2, 0, 0, 3, 4	2, 1, 3, 6, 8, 8, 8, 5, 5, 3, 9, 5,

Test	Expected	Got
4, 6, 0, 5, 3, 7, 4, 2, 8, 9, 2, 4, 7,	5, 1, 9, 9, 8, 3, 4, 4, 4, 7, 1, 4,	5, 1, 9, 9, 8, 3, 4, 4, 4, 7, 1, 4,
9, 7, 9, 6, 9, 7, 3, 3, 7, 7, 5, 2, 7,	0, 6, 3, 1, 1, 8, 9, 5, 9, 8, 1, 2,	0, 6, 3, 1, 1, 8, 9, 5, 9, 8, 1, 2,
3, 7, 5, 5, 3, 6, 3, 5, 0, 7, 0, 3, 5,	4, 2, 6, 8, 6, 8, 6, 1, 6, 9, 0, 4,	4, 2, 6, 8, 6, 8, 6, 1, 6, 9, 0, 4,
9, 5, 2, 0, 7, 8, 1, 0, 9, 5, 7, 6, 0,	1, 8, 0, 2, 4, 5, 3, 5, 2, 0, 4, 9,	1, 8, 0, 2, 4, 5, 3, 5, 2, 0, 4, 9,
8, 6, 0, 9, 9, 6, 5, 7, 0, 8, 2, 1, 0,	7, 5, 4, 2, 1, 7, 8, 4, 9, 8, 0, 9,	7, 5, 4, 2, 1, 7, 8, 4, 9, 8, 0, 9,
3, 2, 1, 8, 0, 6, 2, 7, 6, 7, 5, 3, 0,	0, 3, 1, 4, 8, 4, 4, 7, 4, 0, 4, 1,	0, 3, 1, 4, 8, 4, 4, 7, 4, 0, 4, 1,
0, 8, 2, 7, 2, 0, 1, 8, 7, 4, 2, 6, 3,	8, 2, 2, 5, 6, 3, 7, 1, 9, 4, 6, 0,	8, 2, 2, 5, 6, 3, 7, 1, 9, 4, 6, 0,
4, 1, 9, 1, 0, 6, 9, 3, 3, 5, 5, 3, 9,	5, 3, 7, 4, 2, 8, 9, 2, 4, 7, 9, 7,	5, 3, 7, 4, 2, 8, 9, 2, 4, 7, 9, 7,
8, 6, 0, 0, 0, 7, 8, 2, 9, 5, 2, 1, 4,	9, 6, 9, 7, 3, 3, 7, 7, 5, 2, 7, 3,	9, 6, 9, 7, 3, 3, 7, 7, 5, 2, 7, 3,
2, 5, 2, 0, 8, 7, 2, 0, 5, 6, 3, 6, 2,	7, 5, 5, 3, 6, 3, 5, 0, 7, 0, 3, 5,	7, 5, 5, 3, 6, 3, 5, 0, 7, 0, 3, 5,
8, 5, 1, 4, 7, 8, 0, 2, 0, 8, 5, 9, 9,	9, 5, 2, 0, 7, 8, 1, 0, 9, 5, 7, 6,	9, 5, 2, 0, 7, 8, 1, 0, 9, 5, 7, 6,
1, 8, 0, 7, 0, 0, 1, 6, 5, 5, 1, 1, 5,	0, 8, 6, 0, 9, 9, 6, 5, 7, 0, 8, 2,	0, 8, 6, 0, 9, 9, 6, 5, 7, 0, 8, 2,
7, 9, 2, 1, 4, 6, 9, 6, 4, 4, 7, 5, 2,	1, 0, 3, 2, 1, 8, 0, 6, 2, 7, 6, 7,	1, 0, 3, 2, 1, 8, 0, 6, 2, 7, 6, 7,
5, 1, 7, 6, 8, 2, 7, 0, 7, 2, 0, 5, 0,	5, 3, 0, 0, 8, 2, 7, 2, 0, 1, 8, 7,	5, 3, 0, 0, 8, 2, 7, 2, 0, 1, 8, 7,
5, 8, 5, 6, 3, 9, 9, 4, 0, 3, 6, 3, 7,	4, 2, 6, 3, 4, 1, 9, 1, 0, 6, 9, 3,	4, 2, 6, 3, 4, 1, 9, 1, 0, 6, 9, 3,
6, 6, 7, 3, 5, 9, 5, 8, 6, 2, 7, 3, 0,	3, 5, 5, 3, 9, 8, 6, 0, 0, 0, 7, 8,	3, 5, 5, 3, 9, 8, 6, 0, 0, 0, 7, 8,
8, 3, 3, 9, 5, 2,snip 8, 5,	2, 9, 5, 2, 1, 4, 2, 5, 2, 0, 8, 7,	2, 9, 5, 2, 1, 4, 2, 5, 2, 0, 8, 7,
2, 5, 7, 9, 9, 2, 6, 7, 0, 2, 9, 0, 0,	2, 0, 5, 6, 3, 6, 2, 8, 5, 1, 4, 7,	2, 0, 5, 6, 3, 6, 2, 8, 5, 1, 4, 7,
4, 0, 9, 8, 9, 4, 0, 5, 4, 9, 9, 5, 7,	8, 0, 2, 0, 8, 5, 9, 9, 1, 8, 0, 7,	8, 0, 2, 0, 8, 5, 9, 9, 1, 8, 0, 7,
3, 8, 9, 0, 8, 3, 5, 6, 5, 1, 0, 8, 6,	0, 0, 1, 6, 5, 5, 1, 1, 5, 7, 9, 2,	0, 0, 1, 6, 5, 5, 1, 1, 5, 7, 9, 2,
7, 0, 1, 2, 0, 3, 8, 2, 3, 4, 8, 0, 2,	1, 4, 6, 9, 6, 4, 4, 7, 5, 2, 5, 1,	1, 4, 6, 9, 6, 4, 4, 7, 5, 2, 5, 1,
6, 5, 0, 8, 1, 1, 7, 7, 5, 9, 2, 7, 7,		7, 6, 8, 2, 7, 0, 7, 2, 0, 5, 0, 5,
	7, 6, 8, 2, 7, 0, 7, 2, 0, 5, 0, 5,	
1, 7, 6, 5, 9, 7, 9, 6, 5, 6, 5, 6, 6, 6, 6, 6, 6, 7, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8,	8, 5, 6, 3, 9, 9, 4, 0, 3, 6, 3, 7,	8, 5, 6, 3, 9, 9, 4, 0, 3, 6, 3, 7,
5, 0, 3, 4, 8, 8, 9, 4, 1, 1, 7, 9, 2,	6, 6, 7, 3, 5, 9, 5, 8, 6, 2, 7, 3,	6, 6, 7, 3, 5, 9, 5, 8, 6, 2, 7, 3,
0, 1, 4, 8, 2, 5, 4, 8, 8, 9, 0, 8, 3,	0, 8, 3, 3, 9, 5, 2, 7, 9, 0, 8,	0, 8, 3, 3, 9, 5, 2, 7, 9, 0, 8,
5, 2, 6, 0, 1, 3, 2, 7, 4, 0, 3, 5, 8,	snip 7, 5, 2, 4, 5, 5, 7, 7,	snip 7, 5, 2, 4, 5, 5, 7, 7,
1, 5, 6, 1, 0, 3, 9, 7, 7, 2, 9, 1, 5,	9, 2, 6, 6, 6, 9, 9, 9, 0, 6, 9, 0,	9, 2, 6, 6, 6, 9, 9, 9, 0, 6, 9, 0,
5, 0, 2, 9, 2, 4, 3, 7, 8, 4, 8, 7, 4,	7, 3, 7, 8, 8, 8, 9, 7, 7, 9, 7, 7,	7, 3, 7, 8, 8, 8, 9, 7, 7, 9, 7, 7,
6, 7, 5, 6, 8, 3, 0, 7, 0, 0, 6, 7, 2,	7, 9, 9, 4, 4, 7, 2, 7, 9, 9, 0, 9,	7, 9, 9, 4, 4, 7, 2, 7, 9, 9, 0, 9,
3, 9, 9, 8, 4, 5, 0, 7, 3, 0, 2, 7, 7,	2, 2, 2, 7, 9, 9, 0, 8, 3, 3, 7, 7,	2, 2, 2, 7, 9, 9, 0, 8, 3, 3, 7, 7,
2, 1, 7, 7, 0, 0, 5, 1, 0, 0, 5, 4, 9,	7, 8, 7, 8, 7, 8, 6, 8, 8, 9, 7, 5,	7, 8, 7, 8, 7, 8, 6, 8, 8, 9, 7, 5,
8, 5, 8, 7, 9, 9, 3, 5, 3, 8, 6, 2, 8,	7, 9, 0, 0, 6, 7, 9, 2, 9, 0, 4, 4,	7, 9, 0, 0, 6, 7, 9, 2, 9, 0, 4, 4,
5, 0, 2, 3, 4, 5, 3, 6, 3, 6, 2, 7, 9,	9, 9, 0, 9, 0, 5, 5, 9, 9, 0, 0, 7,	9, 9, 0, 9, 0, 5, 5, 9, 9, 0, 0, 7,
3, 5, 4, 8, 0, 1, 5, 5, 9, 5, 1, 5, 9,	8, 8, 9, 0, 8, 9, 5, 6, 8, 8, 8, 8,	8, 8, 9, 0, 8, 9, 5, 6, 8, 8, 8, 8,
8, 7, 1, 1, 3, 7, 7, 4, 0, 3, 4, 8, 7,	9, 7, 8, 1, 2, 3, 3, 8, 9, 3, 4, 8,	9, 7, 8, 1, 2, 3, 3, 8, 9, 3, 4, 8,
8, 9, 1, 9, 7, 1, 3, 2, 5, 5, 5, 9, 3,	9, 2, 6, 8, 8, 8, 9, 7, 7, 9, 9, 9,	9, 2, 6, 8, 8, 8, 9, 7, 7, 9, 9, 9,
8, 1, 9, 4, 0, 7, 7, 6, 6, 3, 0, 2, 6,	0, 7, 9, 9, 7, 9, 9, 9, 0, 9, 0, 8,	0, 7, 9, 9, 7, 9, 9, 9, 0, 9, 0, 8,
1, 2, 7, 8, 9, 4, 2, 6, 3, 1, 1, 7, 3,	6, 8, 6, 8, 8, 8, 3, 4, 8, 9, 9, 0,	6, 8, 6, 8, 8, 8, 3, 4, 8, 9, 9, 0,
1, 4, 0, 3, 5, 7, 1, 8, 3, 2, 1, 6, 3,	7, 7, 7, 9, 0, 4, 1, 4, 8, 9, 5, 8,	7, 7, 7, 9, 0, 4, 1, 4, 8, 9, 5, 8,
7, 6, 2, 9, 3, 2, 1, 6, 2, 6, 1, 6, 3,	8, 9, 9, 0, 8, 9, 5, 6, 6, 7, 1, 3,	8, 9, 9, 0, 8, 9, 5, 6, 6, 7, 1, 3,
5, 8, 6, 1, 8, 5, 6, 9, 7, 8, 1, 2, 1,	7, 7, 8, 5, 3, 5, 8, 9, 5, 6, 9, 3,	7, 7, 8, 5, 3, 5, 8, 9, 5, 6, 9, 3,
4, 5, 2, 1, 2, 3, 3, 7, 6, 1, 9, 8, 0,	3, 9, 0, 9, 9, 9, 0, 5, 9, 9, 2, 9,	3, 9, 0, 9, 9, 9, 0, 5, 9, 9, 2, 9,
0, 7, 5, 9, 8, 8, 0, 3, 6, 7, 7, 3, 6,	0, 4, 7, 7, 8, 9, 8, 9, 8, 6, 7, 8,	0, 4, 7, 7, 8, 9, 8, 9, 8, 6, 7, 8,
3, 8, 0, 1, 4, 2, 7, 2, 8, 9, 8, 6, 2,	6, 8, 9, 7, 7, 9, 6, 6, 7, 9, 3, 9,	6, 8, 9, 7, 7, 9, 6, 6, 7, 9, 3, 9,
0, 1, 6, 9, 3, 8, 2, 1, 6, 9, 2, 6, 1,	0, 0, 9, 5, 7, 7, 9, 7, 2, 7, 9, 9,	0, 0, 9, 5, 7, 7, 9, 7, 2, 7, 9, 9,
5, 9, 8, 8, 4, 8, 4, 9, 8, 8, 2, 8, 1,	7, 7, 9, 9, 5, 5, 9, 5, 5, 5, 9, 9,	7, 7, 9, 9, 5, 5, 9, 5, 5, 5, 9, 9,
1, 5, 9, 3, 5, 5, 5, 6, 2, 9, 7, 2, 9,	0, 9, 8, 9, 9, 0, 0, 5, 8, 8, 9, 8,	0, 9, 8, 9, 9, 0, 0, 5, 8, 8, 9, 8,
9, 7, 2, 8, 4, 0, 8, 3, 1, 9, 4, 9, 7,	8, 9, 6, 2, 3, 4, 5, 6, 6, 7, 6, 7,	8, 9, 6, 2, 3, 4, 5, 6, 6, 7, 6, 7,
8, 9, 3, 9, 9, 9, 0, 2, 3, 3, 4, 6, 9,	7, 9, 0, 5, 8, 8, 9, 1, 5, 9, 9, 0,	7, 9, 0, 5, 8, 8, 9, 1, 5, 9, 9, 0,
7, 2, 6, 3, 2, 0, 0, 5, 4, 7, 0, 5, 0,	9, 5, 9, 0, 9, 8, 3, 3, 7, 8, 8, 8,	9, 5, 9, 0, 9, 8, 3, 3, 7, 8, 8, 8,
9, 3, 5, 2, 5, 4, 0, 9, 6, 4, 1, 9, 7,	3, 4, 8, 9, 8, 9, 0, 9, 0, 9, 3, 5,	3, 4, 8, 9, 8, 9, 0, 9, 0, 9, 3, 5,
5, 3, 0, 1, 5, 7, 1, 4, 6, 6, 3, 7, 8,	5, 9, 9, 9, 0, 8, 9, 9, 0, 7, 7, 8,	5, 9, 9, 9, 0, 8, 9, 9, 0, 7, 7, 8,
4, 8, 7, 3, 0, 5, 8, 1, 6, 0, 0, 6, 6,	8, 7, 7, 6, 2, 6, 7, 2, 7, 8, 9, 0,	8, 7, 7, 6, 2, 6, 7, 2, 7, 8, 9, 0,
9, 5, 0, 0, 5, 2, 3, 5, 3, 0, 7, 3, 7,	6, 6, 7, 7, 7, 8, 4, 4, 5, 3, 5,	6, 6, 7, 7, 7, 8, 4, 4, 5, 3, 5,
2, 2, 2, 3, 6, 8, 5, 0, 3, 8, 6, 9, 2,	7, 8, 8, 9, 6, 6, 6, 7, 7, 9, 9, 9,	7, 8, 8, 9, 6, 6, 6, 7, 7, 9, 9, 9,
1, 0, 9, 7, 0, 5, 5, 8, 2, 6, 9, 1, 2,	0, 6, 6, 6, 8, 6, 8, 6, 8, 5, 8, 9,	0, 6, 6, 6, 8, 6, 8, 6, 8, 5, 8, 9,
5, 7, 6, 5, 6, 1, 3, 0, 9, 1, 9, 1, 3,	8, 8, 9, 6, 9, 0, 8, 9, 2, 4, 4, 5,	8, 8, 9, 6, 9, 0, 8, 9, 2, 4, 4, 5,
	7, 3, 2, 3, 7, 7, 9, 9, 9, 0, 9, 7,	7, 3, 2, 3, 7, 7, 9, 9, 9, 0, 9, 7,
	7 0 0 0 0 0 2 6 7 0 0 6	7, 9, 9, 0, 9, 9, 3, 6, 7, 8, 8, 6,
9, 3, 8, 4, 7, 1, 5, 7, 5, 7, 2, 7, 5, 1, 1, 1, 7, 4, 7, 6, 6, 6, 2, 5, 3, 2,	7, 9, 9, 0, 9, 9, 3, 6, 7, 8, 8, 6,	
9, 3, 8, 4, 7, 1, 5, 7, 5, 7, 2, 7, 5,	8, 8, 9, 1, 4, 7, 7, 8, 8, 9, 0, 9,	8, 8, 9, 1, 4, 7, 7, 8, 8, 9, 0, 9,
9, 3, 8, 4, 7, 1, 5, 7, 5, 7, 2, 7, 5, 1, 1, 1, 7, 4, 7, 6, 6, 6, 2, 5, 3, 2, 1, 4, 5, 5, 0, 0, 8, 1, 4, 1, 6, 2, 9,		8, 8, 9, 1, 4, 7, 7, 8, 8, 9, 0, 9, 9, 6, 1, 6, 9, 0, 8, 9, 6, 6, 9, 0,
9, 3, 8, 4, 7, 1, 5, 7, 5, 7, 2, 7, 5, 1, 1, 1, 7, 4, 7, 6, 6, 6, 2, 5, 3, 2, 1, 4, 5, 5, 0, 0, 8, 1, 4, 1, 6, 2, 9, 0, 1, 1, 3, 6, 3, 5, 3, 1, 7, 1, 4, 9,	8, 8, 9, 1, 4, 7, 7, 8, 8, 9, 0, 9,	
9, 3, 8, 4, 7, 1, 5, 7, 5, 7, 2, 7, 5, 1, 1, 1, 7, 4, 7, 6, 6, 6, 2, 5, 3, 2,	8, 8, 9, 1, 4, 7, 7, 8, 8, 9, 0, 9, 9, 6, 1, 6, 9, 0, 8, 9, 6, 6, 9, 0,	9, 6, 1, 6, 9, 0, 8, 9, 6, 6, 9, 0,
9, 3, 8, 4, 7, 1, 5, 7, 5, 7, 2, 7, 5, 1, 1, 1, 7, 4, 7, 6, 6, 6, 2, 5, 3, 2, 1, 4, 5, 5, 0, 0, 8, 1, 4, 1, 6, 2, 9, 0, 1, 1, 3, 6, 3, 5, 3, 1, 7, 1, 4, 9, 7, 8, 7, 6, 1, 9, 0, 0, 9, 5, 0, 7, 7,	8, 8, 9, 1, 4, 7, 7, 8, 8, 9, 0, 9, 9, 6, 1, 6, 9, 0, 8, 9, 6, 6, 9, 0, 6, 9, 5, 9, 0, 9, 9, 8, 9, 9, 0, 9,	9, 6, 1, 6, 9, 0, 8, 9, 6, 6, 9, 0, 6, 9, 5, 9, 0, 9, 9, 8, 9, 9, 0, 9,

Test	Expected	Got
0, 1, 8, 1, 7, 7, 5, 8, 4, 5, 4, 0, 3,	2, 3, 4, 4, 6, 9, 0, 9, 6, 7, 5, 5,	2, 3, 4, 4, 6, 9, 0, 9, 6, 7, 5, 5,
0, 9, 0, 0, 1, 4, 9, 6, 7, 1, 4, 8, 6,		5, 5, 7, 7, 9, 5, 9, 9, 0, 5, 9, 5,
7, 2, 4, 0, 9, 3, 2, 9, 5, 5, 6, 7, 7, 1, 2, 2, 9, 6, 8, 5, 1, 6, 8, 0, 0, 7,	9, 9, 9, 0, 9, 9, 9, 0, 8, 7, 5, 1, 5, 7, 8, 4, 6, 7, 7, 7, 8, 9, 8, 9,	9, 9, 9, 0, 9, 9, 9, 0, 8, 7, 5, 1, 5, 7, 8, 4, 6, 7, 7, 7, 8, 9, 8, 9,
0, 3, 3, 4, 3, 6, 7, 4, 4, 9, 3, 8, 4,	8, 5, 5, 8, 9, 6, 9, 6, 6, 9, 9, 0,	8, 5, 5, 8, 9, 6, 9, 6, 6, 9, 9, 0,
9, 2, 6, 2, 4, 6, 4, 6, 2, 8, 0, 7, 0,	7, 5, 5, 7, 3, 5, 7, 7, 7, 8, 7, 8,	7, 5, 5, 7, 3, 5, 7, 7, 7, 8, 7, 8,
0, 7, 3, 7, 1, 2, 6, 6, 9, 7, 6, 2, 5,		3, 3, 3, 6, 8, 9, 8, 3, 8, 9, 9, 0,
7, 8, 7, 7, 0, 4, 5, 3, 2, 4, 4, 1, 4,	9, 9, 9, 0, 8, 5, 8, 8, 9, 6, 9, 0,	9, 9, 9, 0, 8, 5, 8, 8, 9, 6, 9, 0,
8, 6, 5, 1, 0, 4, 1, 8, 7, 0, 9, 1, 1,	2, 5, 7, 9, 9, 6, 9, 3, 9, 9, 0, 9,	2, 5, 7, 9, 9, 6, 9, 3, 9, 9, 0, 9,
2, 5, 9, 4, 5, 4, 8, 4, 1, 1, 1, 9, 1,	0, 3, 9, 0, 8, 9, 7, 8, 5, 7, 8, 7,	0, 3, 9, 0, 8, 9, 7, 8, 5, 7, 8, 7,
4, 1, 1, 7, 0, 6, 5, 8, 3, 6, 5, 4, 5,		8, 7, 8, 7, 7, 7, 8, 7, 8, 8, 8, 8,
5, 8, 8, 9, 1, 7, 7, 0, 0, 6, 3, 3, 6,		8, 5, 8, 4, 4, 4, 5, 8, 8, 8, 8, 9,
5, 5, 0, 5, 4, 6, 6, 6, 1, 8, 3, 6, 5,		4, 6, 6, 9, 9, 0, 1, 3, 3, 6, 7, 5,
6, 6, 2, 6, 9, 7, 6, 8, 8, 7, 6, 6, 8, 6, 8, 1, 4, 3, 7, 3, 4, 2, 2, 0, 5, 1,	7, 7, 7, 9, 4, 9, 0, 8, 9, 9, 9, 9, 9, 0, 9, 9, 0, 7, 7, 8, 8, 9, 1, 5, 5,	7, 7, 7, 9, 4, 9, 0, 8, 9, 9, 9, 9, 9, 0, 9, 9, 9, 8, 9, 1, 5, 5,
6, 2, 5, 9, 6, 9, 5, 3, 1, 6, 8, 2, 2,	7, 3, 3, 5, 7, 7, 9, 9, 0, 5, 5, 6,	7, 3, 3, 5, 7, 7, 9, 9, 0, 5, 5, 6,
1, 3, 4, 7, 4, 8, 6, 9, 4, 9, 3, 0, 7,	4, 5, 6, 6, 8, 8, 8, 8, 9, 4, 7, 7,	4, 5, 6, 6, 8, 8, 8, 8, 9, 4, 7, 7,
8, 2, 4, 2, 8, 2, 3, 0, 5, 8, 5, 5, 3,		9, 9, 6, 6, 9, 9, 0, 6, 8, 3, 8, 1,
0, 5, 1, 0, 4, 0, 1, 7, 1, 5, 3, 7, 7,	8, 9, 7, 8, 8, 8, 9, 5, 9, 9, 3, 9,	8, 9, 7, 8, 8, 8, 9, 5, 9, 9, 3, 9,
3, 3, 8, 3, 8, 8, 5, 1, 0, 4, 9, 9, 5,	9, 0, 1, 1, 4, 9, 0, 7, 8, 4, 8, 9,	9, 0, 1, 1, 4, 9, 0, 7, 8, 4, 8, 9,
7, 0, 7, 0, 6, 8, 2, 5, 6, 6, 8, 2, 8,	7, 9, 4, 9, 9, 0, 9, 9, 0, 6, 6, 7,	7, 9, 4, 9, 9, 0, 9, 9, 0, 6, 6, 7,
5, 2, 8, 4, 1, 7, 1, 7, 9, 8, 0, 0, 8,	9, 9, 2, 9, 9, 0, 8, 9, 6, 6, 8, 9,	9, 9, 2, 9, 9, 0, 8, 9, 6, 6, 8, 9,
4, 3, 7, 5, 1, 1, 0, 4, 0, 8, 8, 7, 4,		7, 7, 9, 3, 4, 4, 6, 6, 7, 9, 9, 9,
8, 4, 6, 4, 3, 9, 5, 4, 9, 2, 3, 1, 6,	0, 8, 9, 9, 0, 6, 8, 4, 6, 8, 6, 8,	0, 8, 9, 9, 0, 6, 8, 4, 6, 8, 6, 8,
2, 5, 4, 0, 1, 7, 2, 0, 5, 0, 7, 1, 5, 0, 9, 9, 6, 8, 0, 8, 8, 8, 8, 8, 0, 0, 1,	8, 9, 7, 9, 7, 7, 9, 7, 9, 2, 6, 9, 9, 0, 8, 7, 5, 7, 8, 9, 8, 8, 4, 5,	8, 9, 7, 9, 7, 7, 9, 7, 9, 2, 6, 9, 9, 0, 8, 7, 5, 7, 8, 9, 8, 8, 4, 5,
3, 2, 1, 9, 5, 7, 6, 4, 7, 2, 9, 8, 8,		8, 4, 4, 8, 8, 4, 8, 9, 8, 8, 4, 4,
9, 4, 4, 4, 1, 9, 4, 1, 5, 6, 9, 0, 0,		8, 8, 9, 9, 9, 0, 2, 2, 5, 9, 0, 5,
3, 6, 7, 4, 7, 8, 4, 2, 0, 1, 0, 2, 4,	8, 8, 9, 9, 9, 9, 9, 0, 4, 7, 7, 7,	8, 8, 9, 9, 9, 9, 0, 4, 7, 7, 7,
9, 4, 9, 4, 6, 1, 5, 0, 2, 1, 9, 4, 0,	8, 6, 8, 8, 9, 6, 8, 8, 5, 8, 8, 9,	8, 6, 8, 8, 9, 6, 8, 8, 5, 8, 8, 9,
5, 0, 0, 9, 7, 1, 3, 7, 2, 7, 0, 4, 1,	9, 0, 7, 8, 8, 6, 6, 8, 6, 6, 8, 6,	9, 0, 7, 8, 8, 6, 6, 8, 6, 6, 8, 6,
2, 3, 5, 4, 5, 9, 2, 4, 2, 7, 3, 1, 6,		6, 5, 6, 6, 8, 8, 8, 8, 9, 6, 9, 6,
5, 2, 9, 4, 3, 1, 3, 2, 4, 8, 1, 1, 3,		9, 9, 6, 9, 0, 8, 8, 9, 9, 8, 8, 8,
4, 0, 7, 7, 5, 5, 2, 6, 4, 6, 1, 0, 1, 2, 6, 0, 5, 7, 5, 5, 0, 7, 9, 6, 5, 5,	9, 8, 9, 4, 7, 7, 9, 4, 5, 5, 5, 5, 6, 6, 6, 9, 5, 9, 0, 9, 0, 6, 6, 6, 8,	9, 8, 9, 4, 7, 7, 9, 4, 5, 5, 5, 5, 6, 6, 6, 9, 5, 9, 0, 9, 0, 6, 6, 6, 8,
1, 2, 3, 3, 8, 4, 1, 2, 1, 0, 5, 9, 5,	9, 3, 3, 3, 4, 7, 8, 8, 9, 9, 0, 9,	9, 3, 3, 3, 4, 7, 8, 8, 9, 9, 0, 9,
5, 6, 1, 9, 0, 1, 1, 5, 8, 9, 4, 1, 4,	0, 7, 7, 8, 9, 4, 8, 8, 9, 3, 5, 5,	0, 7, 7, 8, 9, 4, 8, 8, 9, 3, 5, 5,
7, 7, 2, 2, 6, 2, 7, 6, 8, 8, 5, 0, 6,	8, 9, 7, 7, 5, 5, 7, 4, 4, 7, 1, 7,	8, 9, 7, 7, 5, 5, 7, 4, 4, 7, 1, 7,
4, 2, 9, 7, 6, 6, 8, 5, 4, 8, 3, 4, 9,	8, 5, 7, 7, 8, 8, 8, 8, 9, 8, 9, 9,	8, 5, 7, 7, 8, 8, 8, 8, 9, 8, 9, 9,
6, 7, 2, 1, 6, 6, 5, 4, 8, 1, 9, 6, 2,	9, 4, 4, 9, 0, 0, 7, 8, 7, 8, 6, 8,	9, 4, 4, 9, 0, 0, 7, 8, 7, 8, 6, 8,
4, 7, 9, 3, 8, 3, 0, 5, 1, 2, 3, 1, 6,	9, 5, 6, 8, 8, 9, 8, 9, 8, 8, 9, 7,	9, 5, 6, 8, 8, 9, 8, 9, 8, 8, 9, 7,
7, 0, 4, 7, 3, 6, 8, 6, 2, 1, 7, 6, 1,		7, 9, 7, 9, 0, 9, 8, 8, 9, 7, 7, 8,
7, 4, 8, 4, 6, 2, 1, 5, 7, 3, 8, 3, 9, 6, 0, 4, 0, 2, 9, 0, 5, 2, 5, 0, 4, 7,	8, 4, 4, 4, 8, 8, 9, 9, 8, 8, 9, 6, 9, 9, 9, 0, 9, 9, 0, 3, 6, 6, 7, 5,	8, 4, 4, 4, 8, 8, 9, 9, 8, 8, 9, 6, 9, 9, 9, 0, 9, 9, 0, 3, 6, 6, 7, 5,
1, 7, 1, 0, 8, 9, 1, 8, 7, 0, 9, 2, 3,		7, 7, 1, 7, 9, 5, 5, 7, 7, 9, 5, 9,
0, 3, 2, 2, 1, 1, 4, 5, 7, 4, 3, 8, 1,	9, 0, 0, 8, 9, 8, 9, 9, 9, 1, 1,	9, 0, 0, 8, 9, 8, 9, 9, 9, 9, 1, 1,
6, 5, 1, 9, 4, 3, 8, 3, 4, 0, 1, 7, 1,	3, 9, 9, 9, 0, 7, 9, 7, 7, 9, 9, 0,	3, 9, 9, 9, 0, 7, 9, 7, 7, 9, 9, 0,
1, 5, 2, 2, 7, 4, 4, 6, 4, 7, 2, 1, 4,	9, 9, 0, 9, 9, 9, 0, 5, 5, 6, 9,	9, 9, 0, 9, 9, 9, 0, 5, 5, 6, 9,
2, 1, 5, 7, 0, 3, 1, 9, 0, 1, 0, 9, 4,		0, 3, 3, 6, 7, 8, 7, 8, 9, 9, 4, 1,
2, 2, 0};	2, 2, 4, 9, 0, 9, 0, 6, 9, 5, 9, 2,	2, 2, 4, 9, 0, 9, 0, 6, 9, 5, 9, 2,
<pre>LLNode* head = LLNode::createWithIterators(arr, arr +</pre>	9, 9, 0, 5, 5, 9, 9, 9, 0, 9, 3, 7,	9, 9, 0, 5, 5, 9, 9, 9, 0, 9, 3, 7,
sizeof(arr) / sizeof(int));	9, 7, 9, 4, 5, 2, 3, 5, 9, 5, 9, 0, 4, 7, 7, 9, 6, 6, 9, 9, 9, 0, 8, 4,	9, 7, 9, 4, 5, 2, 3, 5, 9, 5, 9, 0, 4, 7, 7, 9, 6, 6, 9, 9, 9, 0, 8, 4,
LLNode::printList(head);	3, 4, 4, 8, 9, 3, 3, 4, 7, 7, 9, 9,	3, 4, 4, 8, 9, 3, 3, 4, 7, 7, 9, 9,
<pre>cout &lt;&lt; "\n";</pre>	6, 6, 6, 7, 6, 7, 2, 1, 2, 6, 7, 5,	6, 6, 6, 7, 6, 7, 2, 1, 2, 6, 7, 5,
LLNode* newhead =	7, 9, 7, 7, 9, 0, 8, 8, 8, 2, 3,	7, 9, 7, 7, 9, 0, 8, 8, 8, 2, 3,
<pre>replaceFirstGreater(head);</pre>	8, 8, 9, 5, 2, 5, 5, 5, 9, 0, 6, 6,	8, 8, 9, 5, 2, 5, 5, 5, 9, 0, 6, 6,
<pre>LLNode::printList(newhead);</pre>	9, 9, 0, 1, 5, 5, 8, 9, 0, 7, 4, 7,	9, 9, 0, 1, 5, 5, 8, 9, 0, 7, 4, 7,
	8, 8, 6, 6, 7, 7, 8, 8, 9, 9, 6, 6,	8, 8, 6, 6, 7, 7, 8, 8, 9, 9, 6, 6,
	9, 9, 9, 0, 8, 8, 8, 9, 8, 8, 9, 4,	9, 9, 9, 0, 8, 8, 8, 9, 8, 8, 9, 4,
	9, 0, 7, 8, 6, 6, 8, 8, 8, 8, 9, 9,	9, 0, 7, 8, 6, 6, 8, 8, 8, 8, 9, 9,
	0, 7, 4, 7, 9, 0, 8, 9, 5, 5, 6, 2, 3, 6, 6, 7, 8, 4, 7, 8, 6, 8, 9, 7,	0, 7, 4, 7, 9, 0, 8, 9, 5, 5, 6, 2, 3, 6, 6, 7, 8, 4, 7, 8, 6, 8, 9, 7,
	7, 7, 8, 7, 7, 8, 8, 9, 6, 7, 5, 5,	7, 7, 8, 7, 7, 8, 8, 9, 6, 7, 5, 5,

Test	Expected	Got
	5, 7, 5, 7, 4, 7, 8, 7, 8, 8, 8, 9	5, 7, 5, 7, 4, 7, 8, 7, 8, 8, 8, 9,
	0, 8, 9, 9, 0, 3, 4, 3, 4, 4, 4,	0, 8, 9, 9, 9, 0, 3, 4, 3, 4, 4, 4,
	4, 4, 5, 7, 8, 8, 8, 9, 6, 9, 9, 9	4, 4, 5, 7, 8, 8, 8, 9, 6, 9, 9, 9,
	0, 8, 8, 9, 4, 7, 1, 7, 9, 5, 5, 7	0, 8, 8, 9, 4, 7, 1, 7, 9, 5, 5, 7,
	7, 7, 9, 6, 6, 7, 7, 9, 4, 4, 5, 5	7, 7, 9, 6, 6, 7, 7, 9, 4, 4, 5, 5,
	5, 7, 9, 3, 9, 9, 0, 1, 9, 9, 0, 0	5, 7, 9, 3, 9, 9, 0, 1, 9, 9, 0, 0,
	0, 0, 0]	0, 0, 0]

Passed all tests! ✓

Chính xác

Điểm cho bài nộp này: 1,00/1,00.

## Câu hỏi 12

Chính xác

Điểm 1,00 của 1,00

Class LLNode representing a node of singly linked lists is declared as below:

```
class LLNode {
public:
    int val;
    LLNode* next;
    LLNode(); // Constructor: val = 0, next = nullptr
    LLNode(int val, LLNode* next); // Constructor with customized data
}
```

Given a singly linked list head node.

Your task is to implement a function with following prototype:

```
LLNode* reverseLinkedList(LLNode* head);
```

The function returns head node of the reversed singly linked list.

#### Note:

- The iostream library has been included and namespace std is being used. No other libraries are allowed.
- The constructors and methods of class LLNode have been defined fully so you do not need to redefine them.
- You can write helper functions.

### For example:

Test	Result
<pre>int arr[] = {13, 88, 60, 7, 192}; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n";</pre>	[13, 88, 60, 7, 192] [192, 7, 60, 88, 13]
<pre>LLNode* newhead = reverseLinkedList(head); LLNode::printList(newhead); newhead-&gt;clear();</pre>	

Answer: (penalty regime: 0 %)

Reset answer

```
1 | LLNode* reverseLinkedList(LLNode* head) {
 2
        // STUDENT ANSWER
        if(head==nullptr) return nullptr;
 3
 4
        LLNode*prev=nullptr;
 5
        LLNode*current=head;
 6
        LLNode*next=nullptr;
 7
        while(current!=nullptr){
 8
            next=current->next;
 9
            current->next=prev;
10
            prev=current;
11
            current=next;
12
13
        head=prev;
14
        return head;
15
16
```

	Test	Expected	Got	
~	<pre>int arr[] = {13, 88, 60, 7, 192}; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = reverseLinkedList(head); LLNode::printList(newhead); newhead-&gt;clear();</pre>	[13, 88, 60, 7, 192] [192, 7, 60, 88, 13]	[13, 88, 60, 7, 192] [192, 7, 60, 88, 13]	<b>~</b>
•	<pre>int arr[] = {}; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = reverseLinkedList(head); LLNode::printList(newhead); newhead-&gt;clear();</pre>			•
~	<pre>int arr[] = {31, 22, 46, 152, 14, 87, 196, 97, 5, 93}; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = reverseLinkedList(head); LLNode::printList(newhead); newhead-&gt;clear();</pre>	[31, 22, 46, 152, 14, 87, 196, 97, 5, 93] [93, 5, 97, 196, 87, 14, 152, 46, 22, 31]	[31, 22, 46, 152, 14, 87, 196, 97, 5, 93] [93, 5, 97, 196, 87, 14, 152, 46, 22, 31]	•
~	<pre>int arr[] = {115, 59, 178, 39, 109, 18, 154, 106, 94, 174, 51, 33, 132, 195, 161, 37, 61, 107, 120, 190}; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = reverseLinkedList(head); LLNode::printList(newhead); newhead-&gt;clear();</pre>	[115, 59, 178, 39, 109, 18, 154, 106, 94, 174, 51, 33, 132, 195, 161, 37, 61, 107, 120, 190] [190, 120, 107, 61, 37, 161, 195, 132, 33, 51, 174, 94, 106, 154, 18, 109, 39, 178, 59, 115]	[115, 59, 178, 39, 109, 18, 154, 106, 94, 174, 51, 33, 132, 195, 161, 37, 61, 107, 120, 190] [190, 120, 107, 61, 37, 161, 195, 132, 33, 51, 174, 94, 106, 154, 18, 109, 39, 178, 59, 115]	~

Got

	Test	Expected
<b>~</b>	int arr[] = {104, 50, 154, 40, 15,	[104, 50,
	171, 56, 114, 67, 90, 46, 179, 152,	67, 90, 4
	177, 139, 45, 18, 55, 38, 158, 8, 157,	18, 55, 3
	143, 37, 16, 83, 173, 82, 156, 51,	83, 173,
	124, 25, 68, 51, 194, 105, 44, 17, 97,	51, 194,
	0, 150, 66, 71, 81, 11, 180, 148, 160,	71, 81, 1
	127, 93, 108, 13, 122, 172, 39, 88,	108, 13,
	62, 38, 61, 156, 45, 131, 69, 191,	61, 156,
	123, 42, 103, 56, 69, 138, 185, 162,	103, 56,
	192, 147, 71, 80, 12, 36, 191, 121,	71, 80, 1
	194, 86, 92, 183, 164, 97, 185, 130,	92, 183,
	29, 174, 112, 194, 185, 132, 27, 197,	112, 194,
	158, 151, 51, 174};	151, 51,
	LLNode* head =	[174, 51,
	LLNode::createWithIterators(arr, arr +	185, 194,
	<pre>sizeof(arr) / sizeof(int));</pre>	164, 183,
	LLNode::printList(head);	12, 80, 7
	cout << "\n";	69, 56, 1
	LLNode* newhead =	45, 156,
	reverseLinkedList(head);	122, 13,
	LLNode::printList(newhead);	11, 81, 7
	<pre>newhead-&gt;clear();</pre>	105, 194,
		82, 173,
		158, 38,
		179, 46,
		40, 154,

154, 40, 15, 171, 56, 114, 46, 179, 152, 177, 139, 45, 38, 158, 8, 157, 143, 37, 16, 82, 156, 51, 124, 25, 68, 105, 44, 17, 97, 0, 150, 66, 11, 180, 148, 160, 127, 93, 122, 172, 39, 88, 62, 38, 45, 131, 69, 191, 123, 42, 69, 138, 185, 162, 192, 147, 12, 36, 191, 121, 194, 86, 164, 97, 185, 130, 29, 174, 185, 132, 27, 197, 158, 174] 151, 158, 197, 27, 132, 112, 174, 29, 130, 185, 97, 92, 86, 194, 121, 191, 36, 71, 147, 192, 162, 185, 138, 103, 42, 123, 191, 69, 131, 61, 38, 62, 88, 39, 172, 108, 93, 127, 160, 148, 180, 71, 66, 150, 0, 97, 17, 44, 51, 68, 25, 124, 51, 156, 83, 16, 37, 143, 157, 8, 55, 18, 45, 139, 177, 152, 90, 67, 114, 56, 171, 15, 50, 104]

[104, 50, 154, 40, 15, 171, 56, 114, 67, 90, 46, 179, 152, 177, 139, 45, 18, 55, 38, 158, 8, 157, 143, 37, 16, 83, 173, 82, 156, 51, 124, 25, 68, 51, 194, 105, 44, 17, 97, 0, 150, 66, 71, 81, 11, 180, 148, 160, 127, 93, 108, 13, 122, 172, 39, 88, 62, 38, 61, 156, 45, 131, 69, 191, 123, 42, 103, 56, 69, 138, 185, 162, 192, 147, 71, 80, 12, 36, 191, 121, 194, 86, 92, 183, 164, 97, 185, 130, 29, 174, 112, 194, 185, 132, 27, 197, 158, 151, 51, 174] [174, 51, 151, 158, 197, 27, 132, 185, 194, 112, 174, 29, 130, 185, 97, 164, 183, 92, 86, 194, 121, 191, 36, 12, 80, 71, 147, 192, 162, 185, 138, 69, 56, 103, 42, 123, 191, 69, 131, 45, 156, 61, 38, 62, 88, 39, 172, 122, 13, 108, 93, 127, 160, 148, 180, 11, 81, 71, 66, 150, 0, 97, 17, 44, 105, 194, 51, 68, 25, 124, 51, 156, 82, 173, 83, 16, 37, 143, 157, 8, 158, 38, 55, 18, 45, 139, 177, 152, 179, 46, 90, 67, 114, 56, 171, 15, 40, 154, 50, 104]

int arr[] = {106, 14, 71, 71, 166, 172, 128, 128, 52, 113, 58, 184, 70, 73, 37, 83, 71, 46, 133, 100, 37, 186, 199, 69, 79, 71, 70, 13, 155, 90, 60, 82, 180, 125, 108, 160, 74, 93, 72, 152, 106, 11, 174, 164, 168, 6, 9, 41, 58, 65, 141, 22, 103, 49, 114, 197, 175, 131, 109, 135, 124, 19, 76, 109, 130, 15, 120, 12, 11, 77, 88, 56, 127, 162, 67, 133, 162, 22, 94, 122, 53, 132, 167, 111, 138, 61, 169, 64, 98, 159, 58, 147, 137, 50, 193, 190, 173, 28, 35, 108, 138, 110, 184, 82, 114, 199, 137, 156, 155, 167, 165, 134, 193, 22, 173, 176, 46, 61, 196, 137, 151, 69, 67, 87, 161, 72, 60, 70, 67, 109, 149, 16, 38, 127, 15, 12, 107, 48, 184, 185, 43, 178, 14, 188, 61, 79, 189, 144, 27, 41, 114, 182, 118, 76, 89, 126, 124, 195, 180, 133, 118, 96, 61, 95, 127, 40, 62, 102, 130, 174, 47, 131, 187, 103, 88, 109, 153, 110, 184, 72, 178, 41, 93, 112, 24, 156, 180, 150, 114, 172, 43, 170, 46, 166, 109, 193, 13, 17, 190, 153, 80, 106, 199, 163, 106, 39, 85, 56, 174, 189, 61, 72, 154, 149, 59, 110, 139, 189, 99, 40, 84, 180, 23, 13, 9, 192, 163, 88, 1, 3, 149, 132, 36, 34, 120, 40, 48, 32, 91, 166, 42, 155, 30, 111, 140, 6, 189, 169, 50, 15, 144, 67, 145, 169, 49, 135, 49, 76, 0, 105, 90, 60, 75, 88, 150, 88, 122, 11, 158, 12, 43, 182, 152, 112, 65, 149, 14, 194, 146, 120, 114, 178, 177, 159, 105, 45, 169, 152, 150, 60, 99, 39, 73, 101, 162, 173, 127, 122, 157, 116, 139, 57, 101, 121, 45, 133, 151, 171, 186, 186,

[106, 14, 71, 71, 166, 172, 128, 128, 52, 113, 58, 184, 70, 73, 37, 83, 71, 46, 133, 100, 37, 186, 199, 69, 79, 71, 70, 13, 155, 90, 60, 82, 180, 125, 108, 160, 74, 93, 72, 152, 106, 11, 174, 164, 168, 6, 9, 41, 58, 65, 141, 22, 103, 49, 114, 197, 175, 131, 109, 135, 124, 19, 76, 109, 130, 15, 120, 12, 11, 77, 88, 56, 127, 162, 67, 133, 162, 22, 94, 122, 53, 132, 167, 111, 138, 61, 169, 64, 98, 159, 58, 147, 137, 50, 193, 190, 173, 28, 35, 108, 138, 110, 184, 82, 114, 199, 137, 156, 155, 167, 165, 134, 193, 22, 173, 176, 46, 61, 196, 137, 151, 69, 67, 87, 161, 72, 60, 70, 67, 109, 149, 16, 38, 127, 15, 12, 107, 48, 184, 185, 43, 178, 14, 188, 61, 79, 189, 144, 27, 41, 114, 182, 118, 76, 89, 126, 124, 195, 180, 133, 118, 96, 61, 95, 127, 40, 62, 102, 130, 174, 47, 131, 187, 103, 88, 109, 153, 110, 184, 72, 178, 41, 93, 112, 24, 156, 180, 150, 114, 172, 43, 170, 46, 166, 109, 193, 13, 17, 190, 153, 80, 106, 199, 163, 106, 39, 85, 56, 174, 189, 61, 72, 154, 149, 59, 110, 139, 189, 99, 40, 84, 180, 23, 13, 9, 192, 163, 88, 1, 3, 149, 132, 36, 34, 120, 40, 48, 32, 91, 166, 42, 155, 30, 111, 140, 6, 189, 169, 50, 15, 144, 67, 145, 169, 49, 135, 49, 76, 0, 105, 90, 60, 75, 88, 150, 88, 122, 11, 158, 12, 43, 182, 152, 112, 65, 149, 14, 194, 146, 120, 114, 178, 177, 159, 105, 45, 169, 152, 150, 60, 99, 39, 73, 101, 162, 173, 127, 122, 157, 116, 139, 57, 101, 121, 45, 133, 151,

171, 186, 186, 116, 4, 173, 118, 103,

[106, 14, 71, 71, 166, 172, 128, 128, 52, 113, 58, 184, 70, 73, 37, 83, 71, 46, 133, 100, 37, 186, 199, 69, 79, 71, 70, 13, 155, 90, 60, 82, 180, 125, 108, 160, 74, 93, 72, 152, 106, 11, 174, 164, 168, 6, 9, 41, 58, 65, 141, 22, 103, 49, 114, 197, 175, 131, 109, 135, 124, 19, 76, 109, 130, 15, 120, 12, 11, 77, 88, 56, 127, 162, 67, 133, 162, 22, 94, 122, 53, 132, 167, 111, 138, 61, 169, 64, 98, 159, 58, 147, 137, 50, 193, 190, 173, 28, 35, 108, 138, 110, 184, 82, 114, 199, 137, 156, 155, 167, 165, 134, 193, 22, 173, 176, 46, 61, 196, 137, 151, 69, 67, 87, 161, 72, 60, 70, 67, 109, 149, 16, 38, 127, 15, 12, 107, 48, 184, 185, 43, 178, 14, 188, 61, 79, 189, 144, 27, 41, 114, 182, 118, 76, 89, 126, 124, 195, 180, 133, 118, 96, 61, 95, 127, 40, 62, 102, 130, 174, 47, 131, 187, 103, 88, 109, 153, 110, 184, 72, 178, 41, 93, 112, 24, 156, 180, 150, 114, 172, 43, 170, 46, 166, 109, 193, 13, 17, 190, 153, 80, 106, 199, 163, 106, 39, 85, 56, 174, 189, 61, 72, 154, 149, 59, 110, 139, 189, 99, 40, 84, 180, 23, 13, 9, 192, 163, 88, 1, 3, 149, 132, 36, 34, 120, 40, 48, 32, 91, 166, 42, 155, 30, 111, 140, 6, 189, 169, 50, 15, 144, 67, 145, 169, 49, 135, 49, 76, 0, 105, 90, 60, 75, 88, 150, 88, 122, 11, 158, 12, 43, 182, 152, 112, 65, 149, 14, 194, 146, 120, 114, 178, 177, 159, 105, 45, 169, 152, 150, 60, 99, 39, 73, 101, 162, 173, 127, 122, 157, 116, 139, 57, 101, 121, 45, 133, 151, 171, 186, 186, 116, 4, 173, 118, 103,

116, 4, 173, 118, 103, 70, 133, 158,

Test 119, 47, 142, 111, 110, 96, 68, 118, 153, 178, 174, 130, 176, 186, 23, 193, 40, 175, 107, 184, 168, 185, 56, 167, 169, 68, 42, 75, 26, 174, 92, 46, 18, 85, 131, 164, 15, 116, 197, 88, 143, 8, 115, 199, 173, 142, 139, 162, 62, 7, 33, 2, 4, 54, 22, 135, 194, 34, 17, 90, 154, 71, 6, 156, 76, 66, 172, 157, 39, 92, 68, 169, 117, 166, 86, 153, 106, 63, 142, 190, 149, 58, 31, 19, 114, 35, 110, 108, 103, 27, 139, 97, 166, 186, 164, 55, 19, 133, 194, 153, 38, 8, 87, 35, 179, 5, 32, 143, 104, 86, 184, 116, 70, 39, 22, 172, 28, 40, 72, 116, 192, 17, 159, 169, 143, 167, 77, 25, 128, 102, 140, 120, 140, 71, 56, 76, 16, 13, 144, 91, 166, 2, 74, 164, 153, 71, 37, 187, 104, 172, 122, 9, 109, 116, 173, 75, 70, 117, 57, 129, 171, 198, 194, 154, 177, 82, 103, 30, 174, 85, 191, 116, 30, 164, 155, 38, 38, 49, 84, 34, 111, 159}; LLNode\* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout << "\n"; LLNode\* newhead =

reverseLinkedList(head); LLNode::printList(newhead);

newhead->clear();

Expected 70, 133, 158, 119, 47, 142, 111, 110, 96, 68, 118, 153, 178, 174, 130, 176, 186, 23, 193, 40, 175, 107, 184, 168, 185, 56, 167, 169, 68, 42, 75, 26, 174, 92, 46, 18, 85, 131, 164, 15, 116, 197, 88, 143, 8, 115, 199, 173, 142, 139, 162, 62, 7, 33, 2, 4, 54, 22, 135, 194, 34, 17, 90, 154, 71, 6, 156, 76, 66, 172, 157, 39, 92, 68, 169, 117, 166, 86, 153, 106, 63, 142, 190, 149, 58, 31, 19, 114, 35, 110, 108, 103, 27, 139, 97, 166, 186, 164, 55, 19, 133, 194, 153, 38, 8, 87, 35, 179, 5, 32, 143, 104, 86, 184, 116, 70, 39, 22, 172, 28, 40, 72, 116, 192, 17, 159, 169, 143, 167, 77, 25, 128, 102, 140, 120, 140, 71, 56, 76, 16, 13, 144, 91, 166, 2, 74, 164, 153, 71, 37, 187, 104, 172, 122, 9, 109, 116, 173, 75, 70, 117, 57, 129, 171, 198, 194, 154, 177, 82, 103, 30, 174, 85, 191, 116, 30, 164, 155, 38, 38, 49, 84, 34, 111, 159] [159, 111, 34, 84, 49, 38, 38, 155, 164, 30, 116, 191, 85, 174, 30, 103, 82, 177, 154, 194, 198, 171, 129, 57, 117, 70, 75, 173, 116, 109, 9, 122, 172, 104, 187, 37, 71, 153, 164, 74, 2, 166, 91, 144, 13, 16, 76, 56, 71, 140, 120, 140, 102, 128, 25, 77, 167, 143, 169, 159, 17, 192, 116, 72, 40, 28, 172, 22, 39, 70, 116, 184, 86, 104, 143, 32, 5, 179, 35, 87, 8, 38, 153, 194, 133, 19, 55, 164, 186, 166, 97, 139, 27, 103, 108, 110, 35, 114, 19, 31, 58, 149, 190, 142, 63, 106, 153, 86, 166, 117, 169, 68, 92, 39, 157, 172, 66, 76, 156, 6, 71, 154, 90, 17, 34, 194, 135, 22, 54, 4, 2, 33, 7, 62, 162, 139, 142, 173, 199, 115, 8, 143, 88, 197, 116, 15, 164, 131, 85, 18, 46, 92, 174, 26, 75, 42, 68, 169, 167, 56, 185, 168, 184, 107, 175, 40, 193, 23, 186, 176, 130, 174, 178, 153, 118, 68, 96, 110, 111, 142, 47, 119, 158, 133, 70, 103, 118, 173, 4, 116, 186, 186, 171, 151, 133, 45, 121, 101, 57, 139, 116, 157, 122, 127, 173, 162, 101, 73, 39, 99, 60, 150, 152, 169, 45, 105, 159, 177, 178, 114, 120, 146, 194, 14, 149, 65, 112, 152, 182, 43, 12, 158, 11, 122, 88, 150, 88, 75, 60, 90, 105, 0, 76, 49, 135, 49, 169, 145, 67, 144, 15, 50, 169, 189, 6, 140, 111, 30, 155, 42, 166, 91, 32, 48, 40, 120, 34, 36, 132, 149, 3, 1, 88, 163, 192, 9, 13, 23, 180, 84, 40, 99, 189, 139, 110, 59, 149, 154, 72, 61, 189, 174, 56, 85, 39, 106, 163, 199, 106, 80, 153, 190, 17, 13, 193, 109, 166, 46, 170, 43, 172, 114, 150, 180, 156, 24, 112, 93, 41, 178, 72, 184, 110, 153, 109, 88, 103, 187, 131, 47, 174, 130, 102, 62, 40, 127, 95, 61, 96, 118, 133,

70, 133, 158, 119, 47, 142, 111, 110, 96, 68, 118, 153, 178, 174, 130, 176, 186, 23, 193, 40, 175, 107, 184, 168, 185, 56, 167, 169, 68, 42, 75, 26, 174, 92, 46, 18, 85, 131, 164, 15, 116, 197, 88, 143, 8, 115, 199, 173, 142, 139, 162, 62, 7, 33, 2, 4, 54, 22, 135, 194, 34, 17, 90, 154, 71, 6, 156, 76, 66, 172, 157, 39, 92, 68, 169, 117, 166, 86, 153, 106, 63, 142, 190, 149, 58, 31, 19, 114, 35, 110, 108, 103, 27, 139, 97, 166, 186, 164, 55, 19, 133, 194, 153, 38, 8, 87, 35, 179, 5, 32, 143, 104, 86, 184, 116, 70, 39, 22, 172, 28, 40, 72, 116, 192, 17, 159, 169, 143, 167, 77, 25, 128, 102, 140, 120, 140, 71, 56, 76, 16, 13, 144, 91, 166, 2, 74, 164, 153, 71, 37, 187, 104, 172, 122, 9, 109, 116, 173, 75, 70, 117, 57, 129, 171, 198, 194, 154, 177, 82, 103, 30, 174, 85, 191, 116, 30, 164, 155, 38, 38, 49, 84, 34, 111, 159] [159, 111, 34, 84, 49, 38, 38, 155, 164, 30, 116, 191, 85, 174, 30, 103, 82, 177, 154, 194, 198, 171, 129, 57, 117, 70, 75, 173, 116, 109, 9, 122, 172, 104, 187, 37, 71, 153, 164, 74, 2, 166, 91, 144, 13, 16, 76, 56, 71, 140, 120, 140, 102, 128, 25, 77, 167, 143, 169, 159, 17, 192, 116, 72, 40, 28, 172, 22, 39, 70, 116, 184, 86, 104, 143, 32, 5, 179, 35, 87, 8, 38, 153, 194, 133, 19, 55, 164, 186, 166, 97, 139, 27, 103, 108, 110, 35, 114, 19, 31, 58, 149, 190, 142, 63, 106, 153, 86, 166, 117, 169, 68, 92, 39, 157, 172, 66, 76, 156, 6, 71, 154, 90, 17, 34, 194, 135, 22, 54, 4, 2, 33, 7, 62, 162, 139, 142, 173, 199, 115, 8, 143, 88, 197, 116, 15, 164, 131, 85, 18, 46, 92, 174, 26, 75, 42, 68, 169, 167, 56, 185, 168, 184, 107, 175, 40, 193, 23, 186, 176, 130, 174, 178, 153, 118, 68, 96, 110, 111, 142, 47, 119, 158, 133, 70, 103, 118, 173, 4, 116, 186, 186, 171, 151, 133, 45. 121, 101, 57, 139, 116, 157, 122, 127, 173, 162, 101, 73, 39, 99, 60, 150, 152, 169, 45, 105, 159, 177, 178, 114, 120, 146, 194, 14, 149, 65, 112, 152, 182, 43, 12, 158, 11, 122, 88, 150, 88, 75, 60, 90, 105, 0, 76, 49, 135, 49, 169, 145, 67, 144, 15, 50, 169, 189, 6, 140, 111, 30, 155, 42, 166, 91, 32, 48, 40, 120, 34, 36, 132, 149, 3, 1, 88, 163, 192, 9, 13, 23, 180, 84, 40, 99, 189, 139, 110, 59, 149, 154, 72, 61, 189, 174, 56, 85, 39, 106, 163, 199, 106, 80, 153, 190, 17, 13, 193, 109, 166, 46, 170, 43, 172, 114, 150, 180, 156, 24, 112, 93, 41, 178, 72, 184, 110, 153, 109, 88, 103, 187, 131, 47, 174, 130, 102, 62, 40, 127, 95, 61, 96, 118, 133,

Test	Expected	Got	
Test	Expected  180, 195, 124, 126, 89, 76, 118, 182, 114, 41, 27, 144, 189, 79, 61, 188, 14, 178, 43, 185, 184, 48, 107, 12, 15, 127, 38, 16, 149, 109, 67, 70, 60, 72, 161, 87, 67, 69, 151, 137, 196, 61, 46, 176, 173, 22, 193, 134, 165, 167, 155, 156, 137, 199, 114, 82, 184, 110, 138, 108, 35, 28, 173, 190, 193, 50, 137, 147, 58, 159, 98, 64, 169, 61, 138, 111, 167, 132, 53, 122, 94, 22, 162, 133, 67, 162, 127, 56, 88, 77, 11, 12, 120, 15, 130, 109, 76, 19, 124, 135, 109, 131, 175, 197, 114, 49, 103, 22, 141, 65, 58, 41, 9, 6, 168, 164, 174, 11, 106, 152, 72, 93, 74, 160, 108, 125, 180, 82, 60, 90, 155, 13, 70, 71, 79, 69, 199, 186, 37, 100, 133, 46, 71, 83, 37, 73, 70, 184, 58, 113, 52, 128, 128, 172, 166, 71, 71, 14, 106]	Got  180, 195, 124, 126, 89, 76, 118, 182, 114, 41, 27, 144, 189, 79, 61, 188, 14, 178, 43, 185, 184, 48, 107, 12, 15, 127, 38, 16, 149, 109, 67, 70, 60, 72, 161, 87, 67, 69, 151, 137, 196, 61, 46, 176, 173, 22, 193, 134, 165, 167, 155, 156, 137, 199, 114, 82, 184, 110, 138, 108, 35, 28, 173, 190, 193, 50, 137, 147, 58, 159, 98, 64, 169, 61, 138, 111, 167, 132, 53, 122, 94, 22, 162, 133, 67, 162, 127, 56, 88, 77, 11, 12, 120, 15, 130, 109, 76, 19, 124, 135, 109, 131, 175, 197, 114, 49, 103, 22, 141, 65, 58, 41, 9, 6, 168, 164, 174, 11, 106, 152, 72, 93, 74, 160, 108, 125, 180, 82, 60, 90, 155, 13, 70, 71, 79, 69, 199, 186, 37, 100, 133, 46, 71, 83, 37, 73, 70, 184, 58, 113, 52, 128, 128, 172, 166, 71, 71, 14, 106]	
int arr[] = {6, 82, 125, 139, 190, 149, 33, 100, 40, 79, 99, 85, 125, 87, 116, 160, 18, 184, 147, 157, 52, 66, 166, 43, 59, 58, 188, 174, 84, 39, 185, 18, 60, 78, 161, 111, 129, 25, 56, 38, 59, 139, 122, 2, 139, 15, 126, 122, 19, 42, 152, 78, 119, 94, 120, 8, 18, 128, 157, 22, 4, 132, 29, 61, 114, 95, 161, 128, 86, 102, 101, 104, 73, 85, 30, 94, 126, 98, 183, 103, 121, 156, 189, 96, 96, 14, 65, 147, 121, 0, 111, 40, 52, 39, 53, 183, 66, 108, 53, 164, 6, 11, 30, 37, 107, 109, 104, 80, 118, 32, 63, 32, 197, 125, 50, 138, 64, 139, 188, 139, 23, 106, 107, 53, 117, 90, 135, 9, 3, 109, 53, 198, 40, 50, 44, 91, 7, 187, 176, 89, 26, 42, 46, 61, 150, 135, 7, 37, 182, 85, 72, 121, 69, 198, 88, 92, 166, 108, 124, 186, 142, 106, 160, 116, 188, 50, 79, 50, 87, 144, 133, 153, 138, 86, 115, 165, 12, 185, 123, 0, 123, 197, 4, 20, 169, 141, 16, 61, 111, 53, 172, 19, 194, 155, 0, 79, 59, 3, 175, 155, 19, 186, 113, 183, 22, 22, 55, 145, 7, 188, 47, 140, 133, 17, 10, 189, 93, 181, 73, 106, 72, 13, 31, 35, 199, 128, 43, 54, 75, 5, 108, 102, 170, 35, 42, 91, 55, 72, 91, 56, 24, 174, 11, 81, 174, 59, 16, 3, 73, 15, 29, 145, 186, 44, 92, 156, 125, 81, 186, 18, 193, 16, 189, 10, 4, 161, 65, 103, 196, 126, 180, 147, 78, 56, 71, 182, 118, 97, 86, 127, 35, 124, 138, 138, 196, 2, 52, 187, 101, 119, 108, 18, 52, 60, 36, 160, 177, 85, 46, 112, 77, 70, 85, 89, 178, 162, 35, 147, 147, 173, 190, 121, 133, 67, 40, 86, 63, 7, 72, 66, 86, 24, 179, 79, 180, 129, 199, 151, 74, 176, 105, 161, 147, 26, 173, 179, 162, 69, 62, 122, 191, 93, 63, 96, 119, 155, 65, 197, 18, 11, 53, 49, 64, 133, 85, 64, 86, 79, 135, 80, 109, 153, 178, 55, 61, 177, 43, 169, 64, 103, 65, 120, 89, 131, 144, 124,	[6, 82, 125, 139, 190, 149, 33, 100, 40, 79, 99, 85, 125, 87, 116, 160, 18, 184, 147, 157, 52, 66, 166, 43, 59, 58, 188, 174, 84, 39, 185, 18, 60, 78, 161, 111, 129, 25, 56, 38, 59, 139, 122, 2, 139, 15, 126, 122, 19, 42, 152, 78, 119, 94, 120, 8, 18, 128, 157, 22, 4, 132, 29, 61, 114, 95, 161, 128, 86, 102, 101, 104, 73, 85, 30, 94, 126, 98, 183, 103, 121, 156, 189, 96, 96, 14, 65, 147, 121, 0, 111, 40, 52, 39, 53, 183, 66, 108, 53, 164, 6, 11, 30, 37, 107, 109, 104, 80, 118, 32, 63, 32, 197, 125, 50, 138, 64, 139, 188, 139, 23, 106, 107, 53, 117, 90, 135, 9, 3, 109, 53, 198, 40, 50, 44, 91, 7, 187, 176, 89, 26, 42, 46, 61, 150, 135, 7, 37, 182, 85, 72, 121, 69, 198, 88, 92, 166, 108, 124, 186, 142, 106, 160, 116, 188, 50, 79, 50, 87, 144, 133, 153, 138, 86, 115, 165, 12, 185, 123, 0, 123, 197, 4, 20, 169, 141, 16, 61, 111, 53, 172, 19, 194, 155, 0, 79, 59, 3, 175, 155, 19, 186, 113, 183, 22, 22, 55, 145, 7, 188, 47, 140, 133, 17, 10, 189, 93, 181, 73, 106, 72, 13, 31, 35, 199, 128, 43, 54, 75, 5, 108, 102, 170, 35, 42, 91, 55, 72, 91, 56, 24, 174, 11, 81, 174, 59, 16, 3, 73, 15, 29, 145, 186, 44, 92, 156, 125, 81, 186, 18, 103, 16, 189, 10, 4, 161, 65, 103, 196, 126, 180, 147, 78, 56, 71, 182, 118, 97, 86, 127, 35, 124, 138, 138, 196, 2, 52, 187, 101, 119, 108, 18, 52, 60, 36, 160, 177, 85, 46, 112, 77, 70, 85, 89, 178, 162, 35, 147, 147, 173, 190, 121, 133, 67, 40, 86, 63, 7, 72, 66, 86, 24, 179, 79, 180, 129, 199, 151, 74, 176, 105, 161, 147, 26, 173, 179, 162, 69, 62, 122, 191, 93, 63, 96, 119, 155, 65, 197, 18, 11, 53, 49, 64, 133, 85, 64, 86, 79, 135, 80, 109, 153, 178, 55, 61, 177, 43, 169,	[6, 82, 125, 139, 190, 149, 33, 100, 40, 79, 99, 85, 125, 87, 116, 160, 18, 184, 147, 157, 52, 66, 166, 43, 59, 58, 188, 174, 84, 39, 185, 18, 60, 78, 161, 111, 129, 25, 56, 38, 59, 139, 122, 2, 139, 15, 126, 122, 19, 42, 152, 78, 119, 94, 120, 8, 18, 128, 157, 22, 4, 132, 29, 61, 114, 95, 161, 128, 86, 102, 101, 104, 73, 85, 30, 94, 126, 98, 183, 103, 121, 156, 189, 96, 96, 14, 65, 147, 121, 0, 111, 40, 52, 39, 53, 183, 66, 108, 53, 164, 6, 11, 30, 37, 107, 109, 104, 80, 118, 32, 63, 32, 197, 125, 50, 138, 64, 139, 188, 139, 23, 106, 107, 53, 117, 90, 135, 9, 3, 109, 53, 198, 40, 50, 44, 91, 7, 187, 176, 89, 26, 42, 46, 61, 150, 135, 7, 37, 182, 85, 72, 121, 69, 198, 88, 92, 166, 108, 124, 186, 142, 106, 160, 116, 188, 50, 79, 50, 87, 144, 133, 153, 138, 86, 115, 165, 12, 185, 123, 0, 123, 197, 4, 20, 169, 141, 16, 61, 111, 53, 172, 19, 194, 155, 0, 79, 59, 3, 175, 155, 19, 186, 113, 183, 22, 22, 55, 145, 7, 188, 47, 140, 133, 17, 10, 189, 93, 181, 73, 106, 72, 13, 31, 35, 199, 128, 43, 54, 75, 5, 108, 102, 170, 35, 42, 91, 55, 72, 91, 56, 24, 174, 11, 81, 174, 59, 16, 3, 73, 15, 29, 145, 186, 44, 92, 156, 125, 81, 186, 18, 103, 16, 189, 10, 4, 161, 65, 103, 196, 126, 180, 147, 78, 56, 71, 182, 118, 97, 86, 127, 35, 124, 138, 138, 196, 2, 52, 187, 101, 119, 108, 18, 52, 60, 36, 160, 177, 85, 46, 112, 77, 70, 85, 89, 178, 162, 35, 147, 147, 173, 190, 121, 133, 67, 40, 86, 63, 7, 72, 66, 86, 24, 179, 79, 180, 129, 199, 151, 74, 176, 105, 161, 147, 26, 173, 179, 162, 69, 62, 122, 191, 93, 63, 96, 119, 155, 65, 197, 18, 11, 53, 49, 64, 133, 85, 64, 86, 79, 135, 80, 109, 153, 178, 55, 61, 177, 43, 169,	*

Test 167, 46, 27, 118, 77, 135, 198, 183, 84, 31, 131, 110, 82, 166, 99, 26, 125, 47, 56, 85, 155, 10, 0, 2, 180, 74, 180, 136, 26, 158, 178, 134, 119, 83, 128, 138, 64, 25, 82, 109, 185, 148, 13, 129, 25, 79, 157, 198, 23, 76, 52, 41, 77, 7, 188, 46, 28, 36, 127, 32, 129, 46, 45, 46, 6, 121, 86, 88, 148, 34, 112, 122, 71, 134, 43, 40, 18, 168, 171, 196, 101, 103, 94, 155, 20, 183, 151, 126, 130, 31, 10, 16, 142, 163, 193, 36, 93, 2, 110, 105, 144, 43, 169, 175, 143, 187, 21, 36, 174, 123, 110, 139, 86, 144, 134, 37, 87, 122, 0, 90, 30, 113, 188, 1, 114, 77, 141, 70, 35, 45, 127, 164, 44, 66, 69, 12, 24, 85, 66, 84, 115, 126, 142, 107, 99, 127, 75, 164, 191, 168, 57, 146, 166, 20, 111, 107, 43, 124, 178, 175, 16, 122, 83, 186, 153, 17, 164, 136, 170, 59, 83, 57, 179, 195, 11, 38, 155, 196, 7, 162, 27, 169, 72, 20, 44, 39, 41, 29, 140, 104, 33, 165, 116, 185, 112, 195, 118, 38, 142, 4, 30, 117, 32, 138, 13, 144, 93, 89, 30, 47, 40, 159, 99, 69, 38, 3, 23, 138, 131, 167, 154, 81, 64, 144, 144, 170, 167, 190, 35, 179, 162, 31, 146, 187, 25, 80, 10, 159, 67, 15, 196, 88, 103, 91, 55, 45, 115, 5, 64, 101, 21, 67, 119, 87, 103, 178, 3, 94, 159, 67, 15, 196, 88, 103, 91, 55, 152, 179, 41, 79, 121, 26, 193, 45, 62, 83, 73, 183, 150, 22, 22, 79, 12, 101, 24, 7, 31, 26, 86, 128, 134, 174, 121, 26, 193, 45, 62, 83, 73, 183, 10, 51, 88, 152, 22, 123, 163, 107, 118, 82, 147, 84, 168, 147, 158, 146, 82, 64, 30, 142, 67, 61, 71, 173, 77, 196, 121, 195, 1, 35, 183, 115, 115, 3, 121, 45, 191, 106, 144, 166, 29, 27, 144, 62, 137, 69, 155, 182, 134, 113, 195, 0, 188, 56, 199, 100, 166, 53, 186, 128, 153, 86, 1, 152, 67, 104, 44, 190, 168, 107, 126, 180, 179, 0, 188, 56, 199, 100, 166, 53, 186, 124, 16, 135, 19, 131, 107, 142, 132, 108, 173, 76, 135, 1, 141, 114, 52, 152, 34, 96, 47, 129, 170, 125, 41, 115, 167, 14, 1, 39, 62, 187, 154, 44, 173, 76, 135, 1, 141, 114, 52, 152, 3, 8, 167, 5, 95, 83, 124, 192, 123, 105, 22, 121, 26, 86, 174, 31, 73, 100, 146, 92, 194, 11, 61, 194, 139, 67, 97, 132, 24, 198, 113, 59, 16, 41, 105, 22, 121, 26, 86, 174, 31, 73, 27, 11, 14, 172, 6, 142, 46, 184, 89, 150, 100, 65, 116, 192, 183, 60, 179, 119, 131, 66, 160, 167, 175, 53, 95, 196, 4, 27, 33, 106, 136, 49, 105, 54, 50, 82, 51, 196, 78, 64, 70, 42, 131, 170, 111, 109, 44, 86, 32, 107, 28, 113, 81, 57, 165, 173, 62, 126, 178, 34, 64, 87, 179, 41, 73, 148, 105, 60, 42, 195, 91, 122, 31, 164, 9, 130, 30, 149, 143, 85, 123, 62, 76, 121, 16, 119, 163, 147, 123, 129, 113, 117, 136, 3, 33, 80, 25, 30, 4, 27, 107, 11, 125, 157, 195, 131, 140, 80, 161, 111, 33, 15, 164, 178, 164, 65, 166,

Expected 64, 103, 65, 120, 89, 131, 144, 124, 167, 46, 27, 118, 77, 135, 198, 183, 84. 31, 131, 110, 82, 166, 99, 26, 125, 47, 56, 85, 155, 10, 0, 2, 180, 74, 180, 136, 26, 158, 178, 134, 119, 83, 128, 138, 64, 25, 82, 109, 185, 148, 13, 129, 25, 79, 157, 198, 23, 76, 52, 41, 77, 7, 188, 46, 28, 36, 127, 32, 129, 46, 45, 46, 6, 121, 86, 88, 148, 34, 112, 122, 71, 134, 43, 40, 18, 168, 171, 196, 101, 103, 94, 155, 20, 183, 151, 126, 130, 31, 10, 16, 142, 163, 193, 36, 93, 2, 110, 105, 144, 43, 169, 175, 143, 187, 21, 36, 174, 123, 110, 139, 86, 144, 134, 37, 87, 122, 0, 90, 30, 113, 188, 1, 114, 77, 141, 70, 35, 45, 127, 164, 44, 66, 69, 12, 24, 85, 66, 84, 115, 126, 142, 107, 99, 127, 75, 164, 191, 168, 57, 146, 166, 20, 111, 107, 43, 124, 178, 175, 16, 122, 83, 186, 153, 17, 164, 136, 170, 59, 83, 57, 179, 195, 11, 38, 155, 196, 7, 162, 27, 169, 72, 20, 44, 39, 41, 29, 140, 104, 33, 165, 116, 185, 112, 195, 118, 38, 142, 4, 30, 117, 32, 138, 13, 144, 93, 89, 30, 47, 40, 159, 99, 69, 38, 3, 23, 138, 131, 167, 154, 81, 64, 144, 144, 170, 167, 190, 35, 179, 162, 31, 146, 187, 25, 80, 10, 45, 115, 5, 64, 101, 21, 67, 119, 87, 103, 178, 3, 94, 152, 179, 41, 79, 150, 22, 22, 79, 12, 101, 24, 7, 31, 26, 86, 128, 134, 174, 10, 51, 88, 152, 22, 123, 163, 107, 118, 82, 147, 84, 168, 147, 158, 146, 82, 64, 30, 142, 67, 61, 71, 173, 77, 196, 121, 195, 1, 35, 183, 115, 115, 3, 121, 45, 191, 106, 144, 166, 29, 27, 144, 62, 137, 69, 155, 182, 134, 113, 195, 128, 153, 86, 1, 152, 67, 104, 44, 190, 168, 107, 126, 180, 179, 124, 16, 135, 19, 131, 107, 142, 132, 108, 34, 96, 47, 129, 170, 125, 41, 115, 167, 14, 1, 39, 62, 187, 154, 44, 3, 8, 167, 5, 95, 83, 124, 192, 123, 100, 146, 92, 194, 11, 61, 194, 139, 67, 97, 132, 24, 198, 113, 59, 16, 41, 27, 11, 14, 172, 6, 142, 46, 184, 89, 150, 100, 65, 116, 192, 183, 60, 179, 119, 131, 66, 160, 167, 175, 53, 95, 196, 4, 27, 33, 106, 136, 49, 105, 54, 50, 82, 51, 196, 78, 64, 70, 42, 131, 170, 111, 109, 44, 86, 32, 107, 28, 113, 81, 57, 165, 173, 62, 126, 178, 34, 64, 87, 179, 41, 73, 148, 105, 60, 42, 195, 91, 122, 31, 164, 9, 130, 30, 149, 143, 85, 123, 62, 76, 121, 16, 119, 163, 147, 123, 129, 113, 117, 136, 3, 33, 80, 25,

Got 64, 103, 65, 120, 89, 131, 144, 124, 167, 46, 27, 118, 77, 135, 198, 183, 84, 31, 131, 110, 82, 166, 99, 26, 125, 47, 56, 85, 155, 10, 0, 2, 180, 74, 180, 136, 26, 158, 178, 134, 119, 83, 128, 138, 64, 25, 82, 109, 185, 148, 13, 129, 25, 79, 157, 198, 23, 76, 52, 41, 77, 7, 188, 46, 28, 36, 127, 32, 129, 46, 45, 46, 6, 121, 86, 88, 148, 34, 112, 122, 71, 134, 43, 40, 18, 168, 171, 196, 101, 103, 94, 155, 20, 183, 151, 126, 130, 31, 10, 16, 142, 163, 193, 36, 93, 2, 110, 105, 144, 43, 169, 175, 143, 187, 21, 36, 174, 123, 110, 139, 86, 144, 134, 37, 87, 122, 0, 90, 30, 113, 188, 1, 114, 77, 141, 70, 35, 45, 127, 164, 44, 66, 69, 12, 24, 85, 66, 84, 115, 126, 142, 107, 99, 127, 75, 164, 191, 168, 57, 146, 166, 20, 111, 107, 43, 124, 178, 175, 16, 122, 83, 186, 153, 17, 164, 136, 170, 59, 83, 57, 179, 195, 11, 38, 155, 196, 7, 162, 27, 169, 72, 20, 44, 39, 41, 29, 140, 104, 33, 165, 116, 185, 112, 195, 118, 38, 142, 4, 30, 117, 32, 138, 13, 144, 93, 89, 30, 47, 40, 159, 99, 69, 38, 3, 23, 138, 131, 167, 154, 81, 64, 144, 144, 170, 167, 190, 35, 179, 162, 31, 146, 187, 25, 80, 10, 159, 67, 15, 196, 88, 103, 91, 55, 45, 115, 5, 64, 101, 21, 67, 119, 87, 103, 178, 3, 94, 152, 179, 41, 79, 121, 26, 193, 45, 62, 83, 73, 183, 150, 22, 22, 79, 12, 101, 24, 7, 31, 26, 86, 128, 134, 174, 10, 51, 88, 152, 22, 123, 163, 107, 118, 82, 147, 84, 168, 147, 158, 146, 82, 64, 30, 142, 67, 61, 71, 173, 77, 196, 121, 195, 1, 35, 183, 115, 115, 3, 121, 45, 191, 106, 144, 166, 29, 27, 144, 62, 137, 69, 155, 182, 134, 113, 195, 0, 188, 56, 199, 100, 166, 53, 186, 128, 153, 86, 1, 152, 67, 104, 44, 190, 168, 107, 126, 180, 179, 124, 16, 135, 19, 131, 107, 142, 132, 108, 173, 76, 135, 1, 141, 114, 52, 152, 34, 96, 47, 129, 170, 125, 41, 115, 167, 14, 1, 39, 62, 187, 154, 44, 3, 8, 167, 5, 95, 83, 124, 192, 123, 105, 22, 121, 26, 86, 174, 31, 73, 100, 146, 92, 194, 11, 61, 194, 139, 67, 97, 132, 24, 198, 113, 59, 16, 41, 27, 11, 14, 172, 6, 142, 46, 184, 89, 150, 100, 65, 116, 192, 183, 60, 179, 119, 131, 66, 160, 167, 175, 53, 95, 196, 4, 27, 33, 106, 136, 49, 105, 54, 50, 82, 51, 196, 78, 64, 70, 42, 131, 170, 111, 109, 44, 86, 32, 107, 28, 113, 81, 57, 165, 173, 62, 126, 178, 34, 64, 87, 179, 41, 73, 148, 105, 60, 42, 195, 91, 122, 31, 164, 9, 130, 30, 149, 143, 85, 123, 62, 76, 121, 16, 119, 163, 147, 123, 129, 113, 117, 136, 3, 33, 80, 25,

Got

Test 43, 130, 86, 104, 31, 91, 81, 193, 190, 185, 191, 155, 149, 91, 79, 87, 116, 59, 194, 115, 113, 85, 197, 33, 165, 74, 61, 57, 93, 92, 26, 9, 116, 162, 127, 21, 39, 118, 73, 18, 113, 165, 117, 183, 136, 94, 183, 101, 15, 143, 49, 174, 21, 92, 129, 21, 142, 194, 30, 140, 65, 83, 28, 36, 58, 27, 29, 184, 41, 82, 178, 43, 170, 67, 163, 155, 38, 197, 116, 78, 106, 191, 57}; LLNode\* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout << "\n"; LLNode\* newhead = reverseLinkedList(head); LLNode::printList(newhead); newhead->clear();

Expected 30, 4, 27 ...snip... 7, 4, 30, 25, 80, 33, 3, 136, 117, 113, 129, 123, 147, 163, 119, 16, 121, 76, 62, 123, 85, 143, 149, 30, 130, 9, 164, 31, 122, 91, 195, 42, 60, 105, 148, 73, 41, 179, 87, 64, 34, 178, 126, 62, 173, 165, 57, 81, 113, 28, 107, 32, 86, 44, 109, 111, 170, 131, 42, 70, 64, 78, 196, 51, 82, 50, 54, 105, 49, 136, 106, 33, 27, 4, 196, 95, 53, 175, 167, 160, 66, 131, 119, 179, 60, 183, 192, 116, 65, 100, 150, 89, 184, 46, 142, 6, 172, 14, 11, 27, 41, 16, 59, 113, 198, 24, 132, 97, 67, 139, 194, 61, 11, 194, 92, 146, 100, 73, 31, 174, 86, 26, 121, 22, 105, 123, 192, 124, 83, 95, 5, 167, 8, 3, 44, 154, 187, 62, 39, 1, 14, 167, 115, 41, 125, 170, 129, 47, 96, 34, 152, 52, 114, 141, 1, 135, 76, 173, 108, 132, 142, 107, 131, 19, 135, 16, 124, 179, 180, 126, 107, 168, 190, 44, 104, 67, 152, 1, 86, 153, 128, 186, 53, 166, 100, 199, 56, 188, 0, 195, 113, 134, 182, 155, 69, 137, 62, 144, 27, 29, 166, 144, 106, 191, 45, 121, 3, 115, 115, 183, 35, 1, 195, 121, 196, 77, 173, 71, 61, 67, 142, 30, 64, 82, 146, 158, 147, 168, 84, 147, 82, 118, 107, 163, 123, 22, 152, 88, 51, 10, 174, 134, 128, 86, 26, 31, 7, 24, 101, 12, 79, 22, 22, 150, 183, 73, 83, 62, 45, 193, 26, 121, 79, 41, 179, 152, 94, 3, 178, 103, 87, 119, 67, 21, 101, 64, 5, 115, 45, 55, 91, 103, 88, 196, 15, 67, 159, 10, 80, 25, 187, 146, 31, 162, 179, 35, 190, 167, 170, 144, 144, 64, 81, 154, 167, 131, 138, 23, 3, 38, 69, 99, 159, 40, 47, 30, 89, 93, 144, 13, 138, 32, 117, 30, 4, 142, 38, 118, 195, 112, 185, 116, 165, 33, 104, 140, 29, 41, 39, 44, 20, 72, 169, 27, 162, 7, 196, 155, 38, 11, 195, 179, 57, 83, 59, 170, 136, 164, 17, 153, 186, 83, 122, 16, 175, 178, 124, 43, 107, 111, 20, 166, 146, 57, 168, 191, 164, 75, 127, 99, 107, 142, 126, 115, 84, 66, 85, 24, 12, 69, 66, 44, 164, 127, 45, 35, 70, 141, 77, 114, 1, 188, 113, 30, 90, 0, 122, 87, 37, 134, 144, 86, 139, 110, 123, 174, 36, 21, 187, 143, 175, 169, 43, 144, 105, 110, 2, 93, 36, 193, 163, 142, 16, 10, 31, 130, 126, 151, 183, 20, 155, 94, 103, 101, 196, 171, 168, 18, 40, 43, 134, 71, 122, 112, 34, 148, 88, 86, 121, 6, 46, 45, 46, 129, 32, 127, 36, 28, 46, 188, 7, 77, 41, 52, 76, 23, 198, 157, 79, 25, 129, 13, 148, 185, 109, 82, 25, 64, 138, 128, 83, 119, 134, 178, 158, 26, 136, 180, 74, 180, 2, 0, 10, 155, 85, 56, 47, 125, 26, 99, 166, 82, 110, 131, 31, 84, 183, 198, 135, 77, 118, 27, 46, 167, 124, 144, 131,

30, 4, 27 ...snip... 7, 4, 30, 25, 80, 33, 3, 136, 117, 113, 129, 123, 147, 163, 119, 16, 121, 76, 62, 123, 85, 143, 149, 30, 130, 9, 164, 31, 122, 91, 195, 42, 60, 105, 148, 73, 41, 179, 87, 64, 34, 178, 126, 62, 173, 165, 57, 81, 113, 28, 107, 32, 86, 44, 109, 111, 170, 131, 42, 70, 64, 78, 196, 51, 82, 50, 54, 105, 49, 136, 106, 33, 27, 4, 196, 95, 53, 175, 167, 160, 66, 131, 119, 179, 60, 183, 192, 116, 65, 100, 150, 89, 184, 46, 142, 6, 172, 14, 11, 27, 41, 16, 59, 113, 198, 24, 132, 97, 67, 139, 194, 61, 11, 194, 92, 146, 100, 73, 31, 174, 86, 26, 121, 22, 105, 123, 192, 124, 83, 95, 5, 167, 8, 3, 44, 154, 187, 62, 39, 1, 14, 167, 115, 41, 125, 170, 129, 47, 96, 34, 152, 52, 114, 141, 1, 135, 76, 173, 108, 132, 142, 107, 131, 19, 135, 16, 124, 179, 180, 126, 107, 168, 190, 44, 104, 67, 152, 1, 86, 153, 128, 186, 53, 166, 100, 199, 56, 188, 0, 195, 113, 134, 182, 155, 69, 137, 62, 144, 27, 29, 166, 144, 106, 191, 45, 121, 3, 115, 115, 183, 35, 1, 195, 121, 196, 77, 173, 71, 61, 67, 142, 30, 64, 82, 146, 158, 147, 168, 84, 147, 82, 118, 107, 163, 123, 22, 152, 88, 51, 10, 174, 134, 128, 86, 26, 31, 7, 24, 101, 12, 79, 22, 22, 150, 183, 73, 83, 62, 45, 193, 26, 121, 79, 41, 179, 152, 94, 3, 178, 103, 87, 119, 67, 21, 101, 64, 5, 115, 45, 55, 91, 103, 88, 196, 15, 67, 159, 10, 80, 25, 187, 146, 31, 162, 179, 35, 190, 167, 170, 144, 144, 64, 81, 154, 167, 131, 138, 23, 3, 38, 69, 99, 159, 40, 47, 30, 89, 93, 144, 13, 138, 32, 117, 30, 4, 142, 38, 118, 195, 112, 185, 116, 165, 33, 104, 140, 29, 41, 39, 44, 20, 72, 169, 27, 162, 7, 196, 155, 38, 11, 195, 179, 57, 83, 59, 170, 136, 164, 17, 153, 186, 83, 122, 16, 175, 178, 124, 43, 107, 111, 20, 166, 146, 57, 168, 191, 164, 75, 127, 99, 107, 142, 126, 115, 84, 66, 85, 24, 12, 69, 66, 44, 164, 127, 45, 35, 70, 141, 77, 114, 1, 188, 113, 30, 90, 0, 122, 87, 37, 134, 144, 86, 139, 110, 123, 174, 36, 21, 187, 143, 175, 169, 43, 144, 105, 110, 2, 93, 36, 193, 163, 142, 16, 10, 31, 130, 126, 151, 183, 20, 155, 94, 103, 101, 196, 171, 168, 18, 40, 43, 134, 71, 122, 112, 34, 148, 88, 86, 121, 6, 46, 45, 46, 129, 32, 127, 36, 28, 46, 188, 7, 77, 41, 52, 76, 23, 198, 157, 79, 25, 129, 13, 148, 185, 109, 82, 25, 64, 138, 128, 83, 119, 134, 178, 158, 26, 136, 180, 74, 180, 2, 0, 10, 155, 85, 56, 47, 125, 26, 99, 166, 82, 110, 131, 31, 84, 183, 198, 135, 77, 118, 27, 46, 167, 124, 144, 131,

	Test	Expected	Got	
		89, 120, 65, 103, 64, 169, 43, 177, 61, 55, 178, 153, 109, 80, 135, 79, 86, 64, 85, 133, 64, 49, 53, 11, 18, 197, 65, 155, 119, 96, 63, 93, 191, 122, 62, 69, 162, 179, 173, 26, 147, 161, 105, 176, 74, 151, 199, 129, 180, 79, 179, 24, 86, 66, 72, 7, 63, 86, 40, 67, 133, 121, 190, 173, 147, 147, 35, 162, 178, 89, 85, 70, 77, 112, 46, 85, 177, 160, 36, 60, 52, 18, 108, 119, 101, 187, 52, 2, 196, 138, 138, 124, 35, 127, 86, 97, 118, 182, 71, 56, 78, 147, 180, 126, 196, 103, 65, 161, 4, 10, 189, 16, 103, 18, 186, 81, 125, 156, 92, 44, 186, 145, 29, 15, 73, 3, 16, 59, 174, 81, 11, 174, 24, 56, 91, 72, 55, 91, 42, 35, 170, 102, 108, 5, 75, 54, 43, 128, 199, 35, 31, 13, 72, 106, 73, 181, 93, 189, 10, 17, 133, 140, 47, 188, 7, 145, 55, 22, 22, 183, 113, 186, 19, 155, 175, 3, 59, 79, 0, 155, 194, 19, 172, 53, 111, 61, 16, 141, 169, 20, 4, 197, 123, 0, 123, 185, 12, 165, 115, 86, 138, 153, 133, 144, 87, 50, 79, 50, 188, 116, 160, 106, 142, 186, 124, 108, 166, 92, 88, 198, 69, 121, 72, 85, 182, 37, 7, 135, 150, 61, 46, 42, 26, 89, 176, 187, 7, 91, 44, 50, 40, 198, 53, 109, 3, 9, 135, 90, 117, 53, 107, 106, 23, 139, 188, 139, 64, 138, 50, 125, 197, 32, 63, 32, 118, 80, 104, 109, 107, 37, 30, 11, 6, 164, 53, 108, 66, 183, 53, 39, 52, 40, 111, 0, 121, 147, 65, 14, 96, 96, 189, 156, 121, 103, 183, 98, 126, 94, 30, 85, 73, 104, 101, 102, 86, 128, 161, 95, 114, 61, 29, 132, 4, 22, 157, 128, 18, 8, 120, 94, 119, 78, 152, 42, 19, 122, 126, 15, 139, 2, 122, 139, 59, 38, 56, 25, 129, 111, 161, 78, 60, 18, 185, 39, 84, 174, 188, 58, 59, 43, 166, 66, 52, 157, 147, 184, 18, 160, 116, 87, 125, 85, 99, 79, 40, 100, 33, 149, 190, 139, 125, 82, 6]	89, 120, 65, 103, 64, 169, 43, 177, 61, 55, 178, 153, 109, 80, 135, 79, 86, 64, 85, 133, 64, 49, 53, 11, 18, 197, 65, 155, 119, 96, 63, 93, 191, 122, 62, 69, 162, 179, 173, 26, 147, 161, 105, 176, 74, 151, 199, 129, 180, 79, 179, 24, 86, 66, 72, 7, 63, 86, 40, 67, 133, 121, 190, 173, 147, 147, 35, 162, 178, 89, 85, 70, 77, 112, 46, 85, 177, 160, 36, 60, 52, 18, 108, 119, 101, 187, 52, 2, 196, 138, 138, 124, 35, 127, 86, 97, 118, 182, 71, 56, 78, 147, 180, 126, 196, 103, 65, 161, 4, 10, 189, 16, 103, 18, 186, 81, 125, 156, 92, 44, 186, 145, 29, 15, 73, 3, 16, 59, 174, 81, 11, 174, 24, 56, 91, 72, 55, 91, 42, 35, 170, 102, 108, 5, 75, 54, 43, 128, 199, 35, 31, 13, 72, 106, 73, 181, 93, 189, 10, 17, 133, 140, 47, 188, 7, 145, 55, 22, 22, 183, 113, 186, 19, 155, 175, 3, 59, 79, 0, 155, 194, 19, 172, 53, 111, 61, 16, 141, 169, 20, 4, 197, 123, 0, 123, 185, 12, 165, 115, 86, 138, 153, 133, 144, 87, 50, 79, 50, 188, 116, 160, 106, 142, 186, 124, 108, 166, 92, 88, 198, 69, 121, 72, 85, 182, 37, 7, 135, 150, 61, 46, 42, 26, 89, 176, 187, 7, 91, 44, 50, 40, 198, 53, 109, 3, 9, 135, 90, 117, 53, 107, 106, 23, 139, 188, 139, 64, 138, 50, 125, 197, 32, 63, 32, 118, 80, 104, 109, 107, 37, 30, 11, 6, 164, 53, 108, 66, 183, 53, 39, 52, 40, 111, 0, 121, 147, 65, 14, 96, 96, 189, 156, 121, 103, 183, 98, 126, 94, 30, 85, 73, 104, 101, 102, 86, 128, 161, 95, 114, 61, 29, 132, 4, 22, 157, 128, 18, 8, 120, 94, 119, 78, 152, 42, 19, 122, 126, 15, 139, 2, 122, 139, 59, 38, 56, 25, 129, 111, 161, 78, 60, 18, 185, 39, 84, 174, 188, 58, 59, 43, 166, 66, 52, 157, 147, 184, 18, 160, 116, 87, 125, 85, 99, 79, 40, 100, 33, 149, 190, 139, 125, 82, 6]	
•	int arr[] = {12, 55, 161, 35, 13, 74, 88, 155, 173, 132, 83, 198, 116, 53, 124, 177, 35, 77, 129, 127, 44, 27, 124, 25, 49, 153, 167, 61, 192, 95, 92, 83, 102, 159, 12, 11, 105, 89, 94, 91, 146, 48, 50, 176, 163, 53, 95, 146, 173, 67, 122, 118, 110, 178, 72, 150, 168, 24, 197, 43, 29, 12, 70, 78, 42, 29, 52, 131, 10, 19, 146, 87, 13, 84, 137, 171, 168, 74, 82, 65, 199, 179, 76, 95, 136, 121, 182, 51, 113, 146, 127, 125, 189, 27, 52, 155, 59, 41, 106, 104, 47, 24, 85, 110, 53, 24, 112, 71, 68, 132, 62, 94, 31, 101, 128, 107, 2, 183, 64, 191, 43, 97, 53, 116, 110, 67, 136, 81, 142, 123, 190, 21, 17, 33, 23, 57, 139, 68, 95, 131, 77, 108, 51, 8, 127, 97, 102, 10, 28, 187, 28, 26, 14, 68, 191, 192, 82,	[12, 55, 161, 35, 13, 74, 88, 155, 173, 132, 83, 198, 116, 53, 124, 177, 35, 77, 129, 127, 44, 27, 124, 25, 49, 153, 167, 61, 192, 95, 92, 83, 102, 159, 12, 11, 105, 89, 94, 91, 146, 48, 50, 176, 163, 53, 95, 146, 173, 67, 122, 118, 110, 178, 72, 150, 168, 24, 197, 43, 29, 12, 70, 78, 42, 29, 52, 131, 10, 19, 146, 87, 13, 84, 137, 171, 168, 74, 82, 65, 199, 179, 76, 95, 136, 121, 182, 51, 113, 146, 127, 125, 189, 27, 52, 155, 59, 41, 106, 104, 47, 24, 85, 110, 53, 24, 112, 71, 68, 132, 62, 94, 31, 101, 128, 107, 2, 183, 64, 191, 43, 97, 53, 116, 110, 67, 136, 81, 142, 123, 190, 21, 17, 33, 23, 57, 139, 68, 95, 131, 77, 108, 51, 8, 127, 97, 102, 10, 28, 187, 28, 26, 14, 68, 191,	[12, 55, 161, 35, 13, 74, 88, 155, 173, 132, 83, 198, 116, 53, 124, 177, 35, 77, 129, 127, 44, 27, 124, 25, 49, 153, 167, 61, 192, 95, 92, 83, 102, 159, 12, 11, 105, 89, 94, 91, 146, 48, 50, 176, 163, 53, 95, 146, 173, 67, 122, 118, 110, 178, 72, 150, 168, 24, 197, 43, 29, 12, 70, 78, 42, 29, 52, 131, 10, 19, 146, 87, 13, 84, 137, 171, 168, 74, 82, 65, 199, 179, 76, 95, 136, 121, 182, 51, 113, 146, 127, 125, 189, 27, 52, 155, 59, 41, 106, 104, 47, 24, 85, 110, 53, 24, 112, 71, 68, 132, 62, 94, 31, 101, 128, 107, 2, 183, 64, 191, 43, 97, 53, 116, 110, 67, 136, 81, 142, 123, 190, 21, 17, 33, 23, 57, 139, 68, 95, 131, 77, 108, 51, 8, 127, 97, 102, 10, 28, 187, 28, 26, 14, 68, 191,	•

Got

Test 100, 120, 113, 173, 115, 0, 72, 94, 4, 103, 80, 110, 136, 198, 88, 189, 80, 0, 48, 199, 119, 174, 3, 183, 31, 91, 6, 43, 99, 140, 40, 136, 85, 109, 34, 31, 178, 24, 25, 104, 194, 79, 154, 94, 156, 44, 45, 140, 129, 199, 5, 22, 0, 103, 55, 42, 2, 69, 1, 40, 182, 126, 189, 49, 120, 175, 85, 188, 14, 133, 89, 79, 164, 101, 112, 51, 80, 186, 187, 80, 168, 70, 0, 100, 18, 75, 101, 112, 51, 80, 186, 187, 80, 168, 45, 62, 60, 17, 171, 48, 189, 19, 38, 76, 164, 93, 162, 13, 48, 121, 80, 97, 171, 48, 189, 19, 38, 76, 164, 93, 0, 26, 177, 102, 68, 56, 66, 3, 3, 174, 40, 65, 70, 24, 94, 178, 125, 161, 5, 32, 41, 148, 164, 49, 145, 145, 152, 1, 17, 130, 53, 16, 192, 46, 198, 30, 136, 110, 177, 181, 180, 111, 126, 110, 37, 71, 194, 102, 53, 59, 143, 90, 40, 128, 14, 144, 55, 177, 0, 176, 7, 161, 73, 36, 162, 57, 14, 76, 109, 188, 192, 28, 105, 112, 82, 122, 45, 192, 112, 122, 196, 176, 120, 45, 75, 161, 181, 154, 150, 110, 41, 91, 156, 198, 43, 3, 96, 90, 18, 46, 65, 81, 153, 10, 20, 83, 19, 85, 40, 147, 88, 111, 10, 112, 193, 49, 179, 165, 192, 78, 55, 64, 36, 57, 79, 144, 140, 175, 145, 83, 65, 174, 197, 174, 9, 31, 164, 62, 9, 176, 45, 151, 139, 12, 175, 145, 83, 65, 174, 197, 174, 9, 144, 171, 177, 151, 102, 181, 120, 61, 31, 164, 62, 9, 176, 45, 151, 139, 24, 31, 32, 50, 143, 192, 51, 55, 28, 138, 132, 20, 114, 131, 155, 41, 40, 194, 118, 34, 67, 173, 153, 186, 116, 193, 145, 190, 78, 169, 109, 125, 146, 155, 41, 40, 194, 118, 34, 67, 173, 74, 174, 175, 134, 119, 169, 124, 195, 96, 19, 6, 38, 72, 21, 138, 122, 23, 127, 59, 100, 165, 25, 199, 175, 153, 192, 38, 121, 177, 78, 40, 142, 122, 190, 95, 179, 155, 158, 5, 61, 5, 117, 150, 43, 5, 111, 161, 145, 69, 183, 147, 15, 135, 28, 101, 138, 164, 39, 160, 129, 69, 188, 54, 194, 112, 103, 34, 62, 84, 161, 170, 42, 8, 75, 132, 152, 121, 74, 31, 77, 147, 84, 187, 132, 43, 170, 52, 83, 42, 62, 147, 149, 164, 70, 21, 24, 145, 26, 16, 143, 76, 59, 68, 18, 27, 100, 158, 100, 102, 30, 75, 86, 115, 54, 66, 91, 149, 164, 70, 21, 24, 145, 26, 16, 136, 137, 154, 60, 107, 164, 55, 108, 71, 101, 47, 14, 64, 94, 154, 102, 89, 139, 89, 133, 180, 121, 62, 9, 10, 106, 37, 4, 131, 78, 129, 76, 48, 156, 89, 11, 15, 169, 132, 184, 46, 192, 12, 14, 180, 68, 127, 99, 165, 130, 139, 67, 124, 58, 75, 46, 166, 38, 37, 0, 92, 60, 183, 23, 129, 57, 121, 82, 21, 95, 123, 72, 169, 168, 106, 71, 36, 67, 40, 110, 166, 103, 170, 197, 187, 158, 190, 163, 42, 68, 172, 0, 94, 63, 164, 116, 156, 81, 16, 184, 190, 11, 100, 12, 40, 125, 3, 0, 153, 164, 91, 95, 109, 67, 5, 65, 64, 85, 190, 192, 61, 145, 185, 5, 40, 7, 136, 188, 185, 43, 128, 157, 186, 152, 29, 196, 74, 198, 182, 147, 115, 126, 11,

Expected 192, 82, 100, 120, 113, 173, 115, 0, 72, 94, 4, 103, 80, 110, 136, 198, 88, 189, 80, 0, 48, 199, 119, 174, 3, 183, 31, 91, 6, 43, 99, 140, 40, 136, 85, 109, 34, 31, 178, 24, 25, 104, 194, 79, 154, 94, 156, 44, 45, 140, 129, 199, 5, 22, 0, 103, 55, 42, 2, 69, 1, 40, 182, 126, 189, 49, 120, 175, 85, 188, 14, 133, 89, 79, 164, 70, 0, 100, 18, 75, 45, 62, 60, 17, 162, 13, 48, 121, 80, 97, 0, 26, 177, 102, 68, 56, 66, 3, 3, 174, 40, 65, 70, 24, 94, 178, 125, 161, 5, 32, 41, 148, 164, 49, 145, 145, 152, 1, 17, 130, 53, 16, 192, 46, 198, 30, 136, 110, 177, 181, 180, 111, 126, 110, 37, 71, 194, 102, 53, 59, 143, 90, 40, 128, 14, 144, 55, 177, 0, 176, 7, 161, 73, 36, 162, 57, 14, 76, 109, 188, 192, 28, 105, 112, 82, 122, 45, 192, 112, 122, 196, 176, 120, 45, 75, 161, 181, 154, 150, 110, 41, 91, 156, 198, 43, 3, 96, 90, 18, 46, 65, 81, 153, 10, 20, 83, 19, 85, 40, 147, 88, 111, 10, 112, 193, 49, 179, 165, 192, 78, 55, 64, 36, 57, 79, 144, 140, 12, 144, 171, 177, 151, 102, 181, 120, 61, 24, 31, 32, 50, 143, 192, 51, 55, 28, 138, 132, 20, 114, 131, 153, 186, 116, 193, 145, 190, 78, 169, 109, 125, 146, 74, 174, 175, 134, 119, 169, 124, 195, 96, 19, 6, 38, 72, 21, 138, 122, 23, 127, 59, 100, 165, 25, 199, 175, 153, 192, 38, 121, 177, 78, 40, 142, 122, 190, 95, 179, 155, 158, 5, 61, 5, 117, 150, 43, 5, 111, 161, 145, 69, 183, 147, 15, 135, 28, 101, 138, 164, 39, 160, 129, 69, 188, 54, 194, 112, 103, 34, 62, 84, 161, 170, 42, 8, 75, 132, 152, 121, 74, 31, 77, 147, 84, 187, 132, 43, 170, 52, 83, 42, 62, 147, 143, 76, 59, 68, 18, 27, 100, 158, 100, 102, 30, 75, 86, 115, 54, 66, 91, 136, 137, 154, 60, 107, 164, 55, 108, 71, 101, 47, 14, 64, 94, 154, 102, 89, 139, 89, 133, 180, 121, 62, 9, 10, 106, 37, 4, 131, 78, 129, 76, 48, 156, 89, 11, 15, 169, 132, 184, 46, 192, 12, 14, 180, 68, 127, 99, 165, 130, 139, 67, 124, 58, 75, 46, 166, 38, 37, 0, 92, 60, 183, 23, 129, 57, 121, 82, 21, 95, 123, 72, 169, 168, 106, 71, 36, 67, 40, 110, 166, 103, 170, 197, 187, 158, 190, 163, 42, 68, 172, 0, 94, 63, 164, 116, 156, 81, 16, 184, 190, 11, 100, 12, 40, 125, 3, 0, 153, 164, 91, 95, 109, 67, 5, 65, 64, 85, 190, 192, 61, 145,

192, 82, 100, 120, 113, 173, 115, 0, 72, 94, 4, 103, 80, 110, 136, 198, 88, 189, 80, 0, 48, 199, 119, 174, 3, 183, 31, 91, 6, 43, 99, 140, 40, 136, 85, 109, 34, 31, 178, 24, 25, 104, 194, 79, 154, 94, 156, 44, 45, 140, 129, 199, 5, 22, 0, 103, 55, 42, 2, 69, 1, 40, 182, 126, 189, 49, 120, 175, 85, 188, 14, 133, 89, 79, 164, 101, 112, 51, 80, 186, 187, 80, 168, 70, 0, 100, 18, 75, 45, 62, 60, 17, 171, 48, 189, 19, 38, 76, 164, 93, 162, 13, 48, 121, 80, 97, 0, 26, 177, 102, 68, 56, 66, 3, 3, 174, 40, 65, 70, 24, 94, 178, 125, 161, 5, 32, 41, 148, 164, 49, 145, 145, 152, 1, 17, 130, 53, 16, 192, 46, 198, 30, 136, 110, 177, 181, 180, 111, 126, 110, 37, 71, 194, 102, 53, 59, 143, 90, 40, 128, 14, 144, 55, 177, 0, 176, 7, 161, 73, 36, 162, 57, 14, 76, 109, 188, 192, 28, 105, 112, 82, 122, 45, 192, 112, 122, 196, 176, 120, 45, 75, 161, 181, 154, 150, 110, 41, 91, 156, 198, 43, 3, 96, 90, 18, 46, 65, 81, 153, 10, 20, 83, 19, 85, 40, 147, 88, 111, 10, 112, 193, 49, 179, 165, 192, 78, 55, 64, 36, 57, 79, 144, 140, 175, 145, 83, 65, 174, 197, 174, 9, 31, 164, 62, 9, 176, 45, 151, 139, 12, 144, 171, 177, 151, 102, 181, 120, 61, 24, 31, 32, 50, 143, 192, 51, 55, 28, 138, 132, 20, 114, 131, 155, 41, 40, 194, 118, 34, 67, 173, 153, 186, 116, 193, 145, 190, 78, 169, 109, 125, 146, 74, 174, 175, 134, 119, 169, 124, 195, 96, 19, 6, 38, 72, 21, 138, 122, 23, 127, 59, 100, 165, 25, 199, 175, 153, 192, 38, 121, 177, 78, 40, 142, 122, 190, 95, 179, 155, 158, 5, 61, 5, 117, 150, 43, 5, 111, 161, 145, 69, 183, 147, 15, 135, 28, 101, 138, 164, 39, 160, 129, 69, 188, 54, 194, 112, 103, 34, 62, 84, 161, 170, 42, 8, 75, 132, 152, 121, 74, 31, 77, 147, 84, 187, 132, 43, 170, 52, 83, 42, 62, 147, 149, 164, 70, 21, 24, 145, 26, 16, 143, 76, 59, 68, 18, 27, 100, 158, 100, 102, 30, 75, 86, 115, 54, 66, 91, 136, 137, 154, 60, 107, 164, 55, 108, 71, 101, 47, 14, 64, 94, 154, 102, 89, 139, 89, 133, 180, 121, 62, 9, 10, 106, 37, 4, 131, 78, 129, 76, 48, 156, 89, 11, 15, 169, 132, 184, 46, 192, 12, 14, 180, 68, 127, 99, 165, 130, 139, 67, 124, 58, 75, 46, 166, 38, 37, 0, 92, 60, 183, 23, 129, 57, 121, 82, 21, 95, 123, 72, 169, 168, 106, 71, 36, 67, 40, 110, 166, 103, 170, 197, 187, 158, 190, 163, 42, 68, 172, 0, 94, 63, 164, 116, 156, 81, 16, 184, 190, 11, 100, 12, 40, 125, 3, 0, 153, 164, 91, 95, 109, 67, 5, 65, 64, 85, 190, 192, 61, 145,

Test 127, 129, 141, 52, 80, 189, 104, 123, 117, 104, 128, 164, 7, 36, 70, 60, 21, 63, 96, 16, 177, 145, 4, 72, 64, 145, 132, 4, 191, 146, 42, 53, 196, 84, 150, 127, 51, 32, 127, 133, 2, 4, 111, 142, 71, 120, 154, 87, 112, 56, 103, 121, 84, 35, 111, 52, 104, 43, 78, 108, 108, 6, 160, 171, 7, 180, 158, 127, 48, 98, 129, 157, 127, 7, 102, 94, 155, 37, 83, 65, 142, 82, 33, 194, 35, 111, 52, 104, 43, 78, 108, 108, 150, 31, 10, 121, 156, 113, 61, 142, 42, 22, 183, 108, 49, 146, 172, 123, 145, 131, 175, 26, 20, 153, 78, 76, 85, 3, 42, 107, 5, 78, 61, 195, 47, 47, 93, 24, 173, 186, 112, 66, 1, 28, 40, 72, 56, 198, 105, 67, 44, 75, 152, 69, 162, 100, 127, 89, 20, 1, 70, 148, 15, 172, 140, 132, 79, 193, 79, 136, 89, 80, 40, 89, 161, 158, 82, 0, 150, 104, 12, 88, 19, 113, 141, 36, 143, 127, 40, 44, 183, 17, 64, 188, 162, 171, 126, 158, 14, 54, 72, 26, 57, 129, 124, 26, 194, 84, 86, 187, 97, 183 ...snip... 171, 71, 144, 180, 126, 156, 53, 196, 145, 138, 5, 173, 77, 23, 69, 148, 99, 86, 80, 70, 162, 197, 182, 197, 9, 65, 77, 64, 79, 85, 125, 105, 121, 3, 152, 144, 84, 178, 74, 105, 132, 113, 45, 1, 180, 27, 8, 143, 63, 155, 17, 40, 126, 65, 136, 51, 171, 126, 102, 183, 125, 108, 175, | 127, 143, 36, 141, 113, 19, 88, 12, 121, 5, 122, 84, 138, 120, 127, 35, 129, 14, 116, 90, 61, 75, 47, 66, 198, 68, 13, 73, 180, 28, 112, 59, 128, 47, 185, 162, 50, 31, 136, 115, 106, 21, 82, 186, 107, 66, 98, 113, 92, 7, 131, 109, 73, 170, 116, 66, 130, 65, 133, 128, 75, 108, 33, 150, 187, 86, 93, 134, 41, 132, 24, 145, 124, 74, 3, 140, 137, 74, 123, 163, 155, 158, 133, 108, 183, 22, 42, 142, 61, 113, 156, 133, 165, 160, 105, 80, 84, 112, 74, 127, 187, 198, 69, 153, 86, 8, 184, 68, 76, 150, 197, 73, 135, 36, 54, 186, 37, 184, 147, 185, 140, 156, 122, 171, 160, 6, 108, 108, 78, 43, 104, 155, 89, 126, 31, 157, 170, 95, 189, 37, 133, 177, 195, 157, 16, 164, 154, 35, 163, 59, 158, 124, 67, 50, 3, 155, 133, 127, 32, 51, 127, 150, 84, 196, 64, 19, 18, 124, 104, 89, 156, 62, 173, 36, 182, 24, 165, 79, 85, 59, 10, 72, 4, 145, 177, 16, 96, 63, 21, 60, 182, 100, 64, 97, 148, 156, 36, 190, 20, 148, 193, 80, 30, 33, 79, 120, 60, 23, 171, 136, 149, 48, 134, 130, 178, 85, 185, 46, 160, 131, 183, 160, 101, 7, 53, 153, 86, 134, 133, 61, 80, 150, 129, 134, 22, 193, 46, 159, 3, 195, 126, 91, 0, 105, 115, 54, 160, 44, 193, 188, 137, 15, 99, 49, 142, 53, 81, 104, 75, 87, 152, 161, 9, 21, 51, 117, 147, 82, 8, 83, 136, 69, 38, 120, 137, 21, 46, 90, 141, 68, 7, 30, 116, 184, 191, 115, 1, 46, 182, 103, 115, 71, 13, 24, 157, 56, 127, 189, 93, 93, 182, 78, 26, 158, 194, 9, 34, 148, 190, 63, 170, 109, 67, 14, 103, 110, 33, 56, 125, 97, 171, 132, 78, 72, 58, 11, 89, 156, 48, 76, 129, 78, 131, 4,

Expected 185, 5, 40, 7, 136, 188, 185, 43, 128, 157, 186, 152, 29, 196, 74, 198, 182, 147, 115, 126, 11, 127, 129, 141, 52, 80, 189, 104, 123, 117, 104, 128, 164, 7, 36, 70, 60, 21, 63, 96, 16, 177, 145, 4, 72, 64, 145, 132, 4, 191, 146, 42, 53, 196, 84, 150, 127, 51, 32, 127, 133, 2, 4, 111, 142, 71, 120, 154, 87, 112, 56, 103, 121, 84, 6, 160, 171, 7, 180, 158, 127, 48, 98, 129, 157, 127, 7, 102, 94, 155, 37, 83, 65, 142, 82, 33, 194, 150, 31, 10, 121, 156, 113, 61, 142, 42, 22, 183, 108, 49, 146, 172, 123, 145, 131, 175, 26, 20, 153, 78, 76, 85, 3, 42, 107, 5, 78, 61, 195, 47, 47, 93, 24, 173, 186, 112, 66, 1, 28, 40, 72, 56, 198, 105, 67, 44, 75, 152, 69, 162, 100, 127, 89, 20, 1, 70, 148, 15, 172, 140, 132, 79, 193, 79, 136, 89, 80, 40, 89, 161, 158, 82, 0, 150, 104, 12, 88, 19, 113, 141, 36, 143, 127, 40, 44, 183, 17, 64, 188, 162, 171, 126, 158, 14, 54, 72, 26, 57, 129, 124, 26, 194, 84, 86, 187, 97, 183, 86, 129, 1 ...snip..., 129, 86, 183, 97, 187, 86, 84, 194, 26, 124, 129, 57, 26, 72, 54, 14, 158, 126, 171, 162, 188, 64, 17, 183, 44, 40, 104, 150, 0, 82, 158, 161, 89, 40, 80, 89, 136, 79, 193, 79, 132, 140, 172, 15, 148, 70, 1, 20, 89, 127, 100, 162, 69, 152, 75, 44, 67, 105, 198, 56, 72, 40, 28, 1, 66, 112, 186, 173, 24, 93, 47, 47, 195, 61, 78, 5, 107, 42, 3, 85, 76, 78, 153, 20, 26, 175, 131, 145, 123, 172, 146, 49, 121, 10, 31, 150, 194, 33, 82, 142, 65, 83, 37, 155, 94, 102, 7, 127, 157, 129, 98, 48, 127, 158, 180, 7, 52, 111, 35, 84, 121, 103, 56, 112, 87, 154, 120, 71, 142, 111, 4, 2, 53, 42, 146, 191, 4, 132, 145, 64, 70, 36, 7, 164, 128, 104, 117, 123, 104, 189, 80, 52, 141, 129, 127, 11, 126, 115, 147, 182, 198, 74, 196, 29, 152, 186, 157, 128, 43, 185, 188, 136, 7, 40, 5, 185, 145, 61, 192, 190, 85, 64, 65, 5, 67, 109, 95, 91, 164, 153, 0, 3, 125, 40, 12, 100, 11, 190, 184, 16, 81, 156, 116, 164, 63, 94, 0, 172, 68, 42, 163, 190, 158, 187, 197, 170, 103, 166, 110, 40, 67, 36, 71, 106, 168, 169, 72, 123, 95, 21, 82, 121, 57, 129, 23, 183, 60, 92, 0, 37, 38, 166, 46, 75, 58, 124, 67, 139, 130, 165, 99, 127, 68, 180, 14, 12, 192, 46, 184, 132, 169, 15,

Got 185, 5, 40, 7, 136, 188, 185, 43, 128, 157, 186, 152, 29, 196, 74, 198, 182, 147, 115, 126, 11, 127, 129, 141, 52, 80, 189, 104, 123, 117, 104, 128, 164, 7, 36, 70, 60, 21, 63, 96, 16, 177, 145, 4, 72, 64, 145, 132, 4, 191, 146, 42, 53, 196, 84, 150, 127, 51, 32, 127, 133, 2, 4, 111, 142, 71, 120, 154, 87, 112, 56, 103, 121, 84, 35, 111, 52, 104, 43, 78, 108, 108, 6, 160, 171, 7, 180, 158, 127, 48, 98, 129, 157, 127, 7, 102, 94, 155, 37, 83, 65, 142, 82, 33, 194, 150, 31, 10, 121, 156, 113, 61, 142, 42, 22, 183, 108, 49, 146, 172, 123, 145, 131, 175, 26, 20, 153, 78, 76, 85, 3, 42, 107, 5, 78, 61, 195, 47, 47, 93, 24, 173, 186, 112, 66, 1, 28, 40, 72, 56, 198, 105, 67, 44, 75, 152, 69, 162, 100, 127, 89, 20, 1, 70, 148, 15, 172, 140, 132, 79, 193, 79, 136, 89, 80, 40, 89, 161, 158, 82, 0, 150, 104, 12, 88, 19, 113, 141, 36, 143, 127, 40, 44, 183, 17, 64, 188, 162, 171, 126, 158, 14, 54, 72, 26, 57, 129, 124, 26, 194, 84, 86, 187, 97, 183, 86, 129, 1 ...snip..., 129, 86, 183, 97, 187, 86, 84, 194, 26, 124, 129, 57, 26, 72, 54, 14, 158, 126, 171, 162, 188, 64, 17, 183, 44, 40, 127, 143, 36, 141, 113, 19, 88, 12, 104, 150, 0, 82, 158, 161, 89, 40, 80, 89, 136, 79, 193, 79, 132, 140, 172, 15, 148, 70, 1, 20, 89, 127, 100, 162, 69, 152, 75, 44, 67, 105, 198, 56, 72, 40, 28, 1, 66, 112, 186, 173, 24, 93, 47, 47, 195, 61, 78, 5, 107, 42, 3, 85, 76, 78, 153, 20, 26, 175, 131, 145, 123, 172, 146, 49, 108, 183, 22, 42, 142, 61, 113, 156, 121, 10, 31, 150, 194, 33, 82, 142, 65, 83, 37, 155, 94, 102, 7, 127, 157, 129, 98, 48, 127, 158, 180, 7, 171, 160, 6, 108, 108, 78, 43, 104, 52, 111, 35, 84, 121, 103, 56, 112, 87, 154, 120, 71, 142, 111, 4, 2, 133, 127, 32, 51, 127, 150, 84, 196, 53, 42, 146, 191, 4, 132, 145, 64, 72, 4, 145, 177, 16, 96, 63, 21, 60, 70, 36, 7, 164, 128, 104, 117, 123, 104, 189, 80, 52, 141, 129, 127, 11, 126, 115, 147, 182, 198, 74, 196, 29, 152, 186, 157, 128, 43, 185, 188, 136, 7, 40, 5, 185, 145, 61, 192, 190, 85, 64, 65, 5, 67, 109, 95, 91, 164, 153, 0, 3, 125, 40, 12, 100, 11, 190, 184, 16, 81, 156, 116, 164, 63, 94, 0, 172, 68, 42, 163, 190, 158, 187, 197, 170, 103, 166, 110, 40, 67, 36, 71, 106, 168, 169, 72, 123, 95, 21, 82, 121, 57, 129, 23, 183, 60, 92, 0, 37, 38, 166, 46, 75, 58, 124, 67, 139, 130, 165, 99, 127, 68, 180, 14, 12, 192, 46, 184, 132, 169, 15, 11, 89, 156, 48, 76, 129, 78, 131, 4,

Test 35, 101, 128, 69, 102, 84, 177, 40, 175, 34, 181, 98, 45, 57, 31, 43, 115, 111, 158, 158, 75, 75, 122, 67, 143, 147, 199, 72, 112, 68, 192, 1, 195, 65, 181, 134, 81, 183, 175, 52, 125, 137, 195, 31, 108, 151, 38, 94, 104, 20, 80, 175, 85, 144, 108, 60, 0, 155, 79, 54, 124, 196, 127, 10, 182, 97, 134, 25, 44, 119, 119, 116, 194, 165, 136, 151, 149, 60, 192, 94, 100, 169, 115, 94, 148, 126, 108, 5, 34, 125, 42, 132, 150, 7, 198, 115, 30, 197, 180, 86, 8, 197, 128, 159, 93, 134, 43, 197, 82, 63, 110, 155, 129, 117, 174, 131, 32, 108, 56, 61, 199, 81, 199, 66, 72, 85, 116, 110, 50, 148, 118, 110, 30, 183, 82, 134, 86, 182, 164, 14, 122, 114, 31, 118, 126, 178, 113, 119, 137, 12, 179, 44, 134, 39, 167, 25, 168, 14, 83, 50, 106, 127, 125, 32, 189, 21, 87, 24, 85, 99, 21, 196, 14, 131, 84, 150, 42, 182, 125, 65, 31, 164, 91, 2, 23, 62, 138, 160, 184, 186, 88, 184, 5, 190, 112, 100, 68, 153, 100, 5, 50, 63, 75, 182, 36, 171, 124, 115, 151, 50, 114, 122, 178, 157, 96, 176, 2, 39, 47, 95, 198, 88, 149, 55, 77, 49, 104, 107, 117, 193, 108, 149, 125, 0, 65, 20, 197, 130, 128, 69, 100, 54, 119, 88, 42, 159, 60, 101, 56, 10, 30, 103, 188, 185, 74, 135, 97, 104, 197, 188, 183, 126, 117, 89, 135, 95, 133, 71, 9, 167, 0, 69, 57, 17, 125, 173, 55, 137, 100, 42, 183, 199, 105, 135, 193, 109, 158, 193, 89, 106, 158, 159, 177, 136, 127, 88, 86, 83, 63, 142, 113, 20, 195, 26, 38, 53, 156, 65, 146, 29, 131, 189, 32, 85, 157, 183, 125, 92, 122, 187, 93, 161, 67, 148, 181, 47, 195, 35, 35, 54, 80, 82, 83, 55, 34, 117, 139, 192, 75, 163, 41, 9, 150, 32, 36, 102, 117, 55, 120, 142, 14, 144, 165, 91, 174, 124, 2, 19, 1, 112, 55, 14, 184, 185, 24, 113, 20, 13, 177, 19, 154, 75, 102, 22, 120, 51, 105, 168, 119, 136, 186, 162, 65, 13, 42, 177, 4, 6, 152, 179, 16, 1, 0, 28, 14, 93, 177, 2, 154, 10, 110, 38, 138, 193, 87, 116, 55, 188, 137, 20, 139, 153, 195, 34, 171, 140, 146, 146, 192, 19, 39, 129, 33, 142, 40, 144, 83, 190, 45, 2, 123, 36, 19, 40, 147, 13, 54, 107, 195, 117, 74, 50, 130, 147, 83, 68, 150, 132, 110, 152, 8, 138, 104, 35, 139, 69, 93, 162, 78, 170, 131, 128, 72, 148, 96, 3, 108, 184, 162, 82, 5, 70, 46, 137, 148, 37, 186, 17, 39, 93, 23, 129, 132, 11, 153, 170, 111, 112, 129, 169, 128, 11, 37, 198, 104}; LLNode\* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout << "\n";</pre>

Expected 37, 106, 10, 9, 62, 121, 180, 133, 89, 139, 89, 102, 154, 94, 64, 14, 47, 101, 71, 108, 55, 164, 107, 60, 154, 137, 136, 91, 66, 54, 115, 86, 75, 30, 102, 100, 158, 100, 27, 18, 68, 59, 76, 143, 16, 26, 145, 24, 21, 70, 164, 149, 147, 62, 42, 83, 52, 170, 43, 132, 187, 84, 147, 77, 31, 74, 121, 152, 132, 75, 8, 42, 170, 161, 84, 62, 34, 103, 112, 194, 54, 188, 69, 129, 160, 39, 164, 138, 101, 28, 135, 15, 147, 183, 69, 145, 161, 111, 5, 43, 150, 117, 5, 61, 5, 158, 155, 179, 95, 190, 122, 142, 40, 78, 177, 121, 38, 192, 153, 175, 199, 25, 165, 100, 59, 127, 23, 122, 138, 21, 72, 38, 6, 19, 96, 195, 124, 169, 119, 134, 175, 174, 74, 146, 125, 109, 169, 78, 190, 145, 193, 116, 186, 153, 173, 67, 34, 118, 194, 40, 41, 155, 131, 114, 20, 132, 138, 28, 55, 51, 192, 143, 50, 32, 31, 24, 61, 120, 181, 102, 151, 177, 171, 144, 12, 139, 151, 45, 176, 9, 62, 164, 31, 9, 174, 197, 174, 65, 83, 145, 175, 140, 144, 79, 57, 36, 64, 55, 78, 192, 165, 179, 49, 193, 112, 10, 111, 88, 147, 40, 85, 19, 83, 20, 10, 153, 81, 65, 46, 18, 90, 96, 3, 43, 198, 156, 91, 41, 110, 150, 154, 181, 161, 75, 45, 120, 176, 196, 122, 112, 192, 45, 122, 82, 112, 105, 28, 192, 188, 109, 76, 14, 57, 162, 36, 73, 161, 7, 176, 0, 177, 55, 144, 14, 128, 40, 90, 143, 59, 53, 102, 194, 71, 37, 110, 126, 111, 180, 181, 177, 110, 136, 30, 198, 46, 192, 16, 53, 130, 17, 1, 152, 145, 145, 49, 164, 148, 41, 32, 5, 161, 125, 178, 94, 24, 70, 65, 40, 174, 3, 3, 66, 56, 68, 102, 177, 26, 0, 97, 80, 121, 48, 13, 162, 93, 164, 76, 38, 19, 189, 48, 171, 17, 60, 62, 45, 75, 18, 100, 0, 70, 168, 80, 187, 186, 80, 51, 112, 101, 164, 79, 89, 133, 14, 188, 85, 175, 120, 49, 189, 126, 182, 40, 1, 69, 2, 42, 55, 103, 0, 22, 5, 199, 129, 140, 45, 44, 156, 94, 154, 79, 194, 104, 25, 24, 178, 31, 34, 109, 85, 136, 40, 140, 99, 43, 6, 91, 31, 183, 3, 174, 119, 199, 48, 0, 80, 189, 88, 198, 136, 110, 80, 103, 4, 94, 72, 0, 115, 173, 113, 120, 100, 82, 192, 191, 68, 14, 26, 28, 187, 28, 10, 102, 97, 127, 8, 51, 108, 77, 131, 95, 68, 139, 57, 23, 33, 17, 21, 190, 123, 142, 81, 136, 67, 110, 116, 53, 97, 43, 191, 64, 183, 2, 107, 128, 101, 31, 94, 62, 132, 68, 71, 112, 24, 53, 110, 85, 24, 47, 104, 106, 41, 59, 155, 52, 27, 189, 125, 127, 146, 113, 51, 182, 121, 136, 95, 76, 179, 199, 65, 82, 74, 168, 171, 137, 84, 13, 87, 146, 19, 10, 131, 52, 29, 42, 78, 70, 12, 29, 43, 197,

Got 37, 106, 10, 9, 62, 121, 180, 133, 89, 139, 89, 102, 154, 94, 64, 14, 47, 101, 71, 108, 55, 164, 107, 60, 154, 137, 136, 91, 66, 54, 115, 86, 75, 30, 102, 100, 158, 100, 27, 18, 68, 59, 76, 143, 16, 26, 145, 24, 21, 70, 164, 149, 147, 62, 42, 83, 52, 170, 43, 132, 187, 84, 147, 77, 31, 74, 121, 152, 132, 75, 8, 42, 170, 161, 84, 62, 34, 103, 112, 194, 54, 188, 69, 129, 160, 39, 164, 138, 101, 28, 135, 15, 147, 183, 69, 145, 161, 111, 5, 43, 150, 117, 5, 61, 5, 158, 155, 179, 95, 190, 122, 142, 40, 78, 177, 121, 38, 192, 153, 175, 199, 25, 165, 100, 59, 127, 23, 122, 138, 21, 72, 38, 6, 19, 96, 195, 124, 169, 119, 134, 175, 174, 74, 146, 125, 109, 169, 78, 190, 145, 193, 116, 186, 153, 173, 67, 34, 118, 194, 40, 41, 155, 131, 114, 20, 132, 138, 28, 55, 51, 192, 143, 50, 32, 31, 24, 61, 120, 181, 102, 151, 177, 171, 144, 12, 139, 151, 45, 176, 9, 62, 164, 31, 9, 174, 197, 174, 65, 83, 145, 175, 140, 144, 79, 57, 36, 64, 55, 78, 192, 165, 179, 49, 193, 112, 10, 111, 88, 147, 40, 85, 19, 83, 20, 10, 153, 81, 65, 46, 18, 90, 96, 3, 43, 198, 156, 91, 41, 110, 150, 154, 181, 161, 75, 45, 120, 176, 196, 122, 112, 192, 45, 122, 82, 112, 105, 28, 192, 188, 109, 76, 14, 57, 162, 36, 73, 161, 7, 176, 0, 177, 55, 144, 14, 128, 40, 90, 143, 59, 53, 102, 194, 71, 37, 110, 126, 111, 180, 181, 177, 110, 136, 30, 198, 46, 192, 16, 53, 130, 17, 1, 152, 145, 145, 49, 164, 148, 41, 32, 5, 161, 125, 178, 94, 24, 70, 65, 40, 174, 3, 3, 66, 56, 68, 102, 177, 26, 0, 97, 80, 121, 48, 13, 162, 93, 164, 76, 38, 19, 189, 48, 171, 17, 60, 62, 45, 75, 18, 100, 0, 70, 168, 80, 187, 186, 80, 51, 112, 101, 164, 79, 89, 133, 14, 188, 85, 175, 120, 49, 189, 126, 182, 40, 1, 69, 2, 42, 55, 103, 0, 22, 5, 199, 129, 140, 45, 44, 156, 94, 154, 79, 194, 104, 25, 24, 178, 31, 34, 109, 85, 136, 40, 140, 99, 43, 6, 91, 31, 183, 3, 174, 119, 199, 48, 0, 80, 189, 88, 198, 136, 110, 80, 103, 4, 94, 72, 0, 115, 173, 113, 120, 100, 82, 192, 191, 68, 14, 26, 28, 187, 28, 10, 102, 97, 127, 8, 51, 108, 77, 131, 95, 68, 139, 57, 23, 33, 17, 21, 190, 123, 142, 81, 136, 67, 110, 116, 53, 97, 43, 191, 64, 183, 2, 107, 128, 101, 31, 94, 62, 132, 68, 71, 112, 24, 53, 110, 85, 24, 47, 104, 106, 41, 59, 155, 52, 27, 189, 125, 127, 146, 113, 51, 182, 121, 136, 95, 76, 179, 199, 65, 82, 74, 168, 171, 137, 84, 13, 87, 146, 19, 10, 131, 52, 29, 42, 78, 70, 12, 29, 43, 197,

Test	Expected	Got
	24, 168, 150, 72, 178, 110, 118, 122, 67, 173, 146, 95, 53, 163, 176, 50, 48, 146, 91, 94, 89, 105, 11, 12,	24, 168, 150, 72, 178, 110, 118, 122, 67, 173, 146, 95, 53, 163, 176, 50, 48, 146, 91, 94, 89, 105, 11, 12,
newhead->clear();	48, 146, 91, 94, 89, 165, 11, 12, 159, 102, 83, 92, 95, 192, 61, 167, 153, 49, 25, 124, 27, 44, 127, 129, 77, 35, 177, 124, 53, 116, 198, 83, 132, 173, 155, 88, 74, 13, 35, 161, 55, 12]	159, 102, 83, 92, 95, 192, 61, 167, 153, 49, 25, 124, 27, 44, 127, 129, 77, 35, 177, 124, 53, 116, 198, 83, 132, 173, 155, 88, 74, 13, 35, 161, 55, 12]
int arr[] = {161, 86, 21, 22, 162, 98, 98, 173, 5, 27, 179, 24, 119, 72, 32, 73, 120, 115, 38, 21, 134, 59, 141, 180, 198, 162, 143, 0, 64, 98, 34, 181, 51, 179, 15, 128, 145, 152, 115, 10, 148, 75, 126, 31, 1, 78, 171, 73, 4, 4, 119, 35, 116, 126, 30, 171, 112, 194, 74, 39, 58, 82, 61, 84, 59, 49, 185, 43, 47, 11, 29, 53, 146, 197, 115, 48, 4, 66, 160, 18, 97, 88, 36, 77, 140, 59, 147, 100, 69, 40, 179, 93, 104, 84, 39, 191, 120, 118, 122, 190, 59, 195, 40, 61, 48, 49, 170, 164, 23, 70, 97, 146, 16, 81, 173, 188, 102, 192, 13, 70, 77, 28, 90, 121, 186, 74, 199, 166, 194, 28, 36, 98, 118, 88, 84, 19, 93, 103, 3, 138, 170, 120, 44, 49, 104, 45, 65, 87, 11, 127, 180, 178, 9, 38, 94, 52, 104, 179, 111, 96, 106, 130, 21, 39, 135, 42, 0, 134, 113, 79, 141, 171, 198, 114, 105, 48, 129, 94, 33, 31, 186, 30, 40, 111, 95, 166, 33, 125, 35, 96, 77, 166, 7, 160, 62, 188, 70, 73, 29, 39, 141, 81, 170, 7, 106, 146, 154, 15, 27, 155, 157, 51, 91, 103, 152, 78, 130, 156, 129, 21, 66, 119, 170, 176, 177, 5, 159, 98, 91, 29, 51, 22, 199, 125, 192, 61, 70, 10, 29, 85, 23,		_
75, 128, 70, 158, 184, 21, 117, 25, 33, 79, 33, 77, 137, 164, 147, 163, 57, 88, 199, 111, 85, 48, 163, 50, 32, 124, 133, 7, 159, 19, 52, 67, 109, 35, 42, 127, 34, 185, 55, 15, 113, 190, 49, 160, 74, 155, 60, 6, 173, 198, 109, 195, 129, 125, 35, 111, 20, 74, 95, 124, 83, 176, 115, 121, 4, 86, 114, 170, 138, 145, 31, 86, 89, 174, 48, 89, 115, 88, 116, 154, 58, 63, 130, 79, 167, 42, 28, 56, 171, 134,	180, 147, 109, 33, 97, 114, 5, 11, 128, 112, 128, 106, 75, 128, 70, 158, 184, 21, 117, 25, 33, 79, 33, 77, 137, 164, 147, 163, 57, 88, 199, 111, 85, 48, 163, 50, 32, 124, 133, 7, 159, 19, 52, 67, 109, 35, 42, 127, 34, 185, 55, 15, 113, 190, 49, 160, 74, 155, 60, 6, 173, 198, 109, 195, 129, 125, 35, 111, 20, 74, 95, 124, 83, 176, 115, 121, 4, 86, 114, 170, 138, 145, 31, 86, 89, 174, 48, 89, 115, 88, 116, 154, 58, 63, 130, 79, 167, 42, 28, 56, 171, 134, 180, 58,	180, 147, 109, 33, 97, 114, 5, 11, 128, 112, 128, 106, 75, 128, 70, 158, 184, 21, 117, 25, 33, 79, 33, 77, 137, 164, 147, 163, 57, 88, 199, 111, 85, 48, 163, 50, 32, 124, 133, 7, 159, 19, 52, 67, 109, 35, 42, 127, 34, 185, 55, 15, 113, 190, 49, 160, 74, 155, 60, 6, 173, 198, 109, 195, 129, 125, 35, 111, 20, 74, 95, 124, 83, 176, 115, 121, 4, 86, 114, 170, 138, 145, 31, 86, 89, 174, 48, 89, 115, 88, 116, 154, 58, 63, 130, 79, 167, 42, 28, 56, 171, 134, 180, 58,
144, 185, 124, 196, 164, 97, 55, 21, 70, 189, 2, 147, 40, 82, 1, 32, 186, 57, 150, 46, 173, 110, 77, 187, 33, 17, 183, 52, 48, 108, 189, 112, 74, 135, 139, 134, 130, 57, 160, 8, 81, 160, 66, 146, 9, 99, 175, 158, 4, 93, 57, 50, 199, 20, 122, 61, 177, 19, 65, 13, 144, 93, 195, 197, 79, 116, 125,	76, 79, 150, 157, 89, 30, 63, 144, 185, 124, 196, 164, 97, 55, 21, 70, 189, 2, 147, 40, 82, 1, 32, 186, 57, 150, 46, 173, 110, 77, 187, 33, 17, 183, 52, 48, 108, 189, 112, 74, 135, 139, 134, 130, 57, 160, 8, 81, 160, 66, 146, 9, 99, 175, 158, 4, 93, 57, 50, 199, 20, 122, 61, 177, 19, 65, 13, 144, 93, 195, 197, 79, 116, 125, 53, 80, 145, 193, 26, 64, 28, 104, 168, 187, 149, 183, 133, 86, 4, 100,	76, 79, 150, 157, 89, 30, 63, 144, 185, 124, 196, 164, 97, 55, 21, 70, 189, 2, 147, 40, 82, 1, 32, 186, 57, 150, 46, 173, 110, 77, 187, 33, 17, 183, 52, 48, 108, 189, 112, 74, 135, 139, 134, 130, 57, 160, 8, 81, 160, 66, 146, 9, 99, 175, 158, 4, 93, 57, 50, 199, 20, 122, 61, 177, 19, 65, 13, 144, 93, 195, 197, 79, 116, 125, 53, 80, 145, 193, 26, 64, 28, 104, 168, 187, 149, 183, 133, 86, 4, 100,

Test 18, 151, 28, 183, 198, 78, 127, 115, 162, 23, 152, 195, 2, 93, 96, 27, 61, 152, 130, 65, 91, 118, 158, 167, 142, 69, 173, 176, 175, 197, 94, 65, 114, 84, 185, 66, 4, 57, 2, 125, 156, 85, 159, 54, 176, 7, 173, 75, 106, 63, 121, 39, 115, 117, 59, 41, 29, 99, 111, 122, 95, 184, 79, 159, 109, 110, 187, 196, 119, 135, 115, 34, 131, 75, 102, 57, 133, 109, 100, 10, 37, 96, 89, 158, 194, 3, 178, 195, 102, 140, 173, 137, 106, 164, 188, 183, 172, 47, 89, 158, 194, 3, 178, 195, 102, 140, 179, 164, 189, 160, 171, 75, 112, 50, 165, 173, 136, 73, 58, 117, 25, 138, 123, 153, 98, 57, 61, 157, 129, 10, 175, 172, 111, 122, 151, 137, 102, 158, 25, 138, 40, 116, 17, 39, 146, 17, 156, 106, 57, 66, 162, 175, 131, 31, 63, 93, 74, 29, 18, 14, 76, 171, 13, 124, 22, 112, 70, 108, 91, 91, 109, 159, 175, 82, 167, 142, 81, 95, 98, 135, 16, 192, 99, 182, 77, 30, 69, 125, 82, 65, 66, 142, 169, 137, 142, 56, 64, 184, 50, 9, 27, 142, 135, 107, 11, 77, 171, 26, 158, 158, 9, 116, 110, 51, 124, 162, 150, 71, 20, 63, 27, 11, 125, 46, 63, 171, 67, 177, 140, 56, 163, 143, 191, 55, 190, 37, 171, 74, 183, 49, 175, 157, 183, 74, 114, 75, 30, 100, 95, 106, 85, 35, 156, 149, 114, 14, 7, 81, 180, 134, 130, 10, 120, 71, 62, 158, 187, 78, 95, 154, 161, 35, 199, 196, 141, 81, 149, 64, 145, 132, 119, 39, 49, 74, 197, 54, 163, 165, 144, 163, 129, 184, 27, 28, 3, 176, 177, 27, 54, 101, 31, 29, 130, 129, 19, 91, 123, 176, 78, 51, 101, 89, 126, 55, 117, 52, 54, 101, 30, 4, 146, 57, 10, 23, 166, 56, 26, 67, 102, 22, 175, 115, 108, 139, 121, 131, 189, 42, 184, 176, 77, 194, 66, 91, 12, 16, 116, 184, 144, 36, 180, 194, 13, 155, 174, 186, 99, 109, 78, 111, 0, 16, 150, 72, 29, 61, 168, 168, 156, 33, 6, 41, 34, 94, 111, 84, 138, 107, 93, 191, 163, 66, 117, 24, 42, 97, 95, 17, 83, 131, 79, 29, 60, 31, 170, 163, 114, 1, 5, 88, 129, 192, 191, 163, 66, 117, 24, 42, 97, 95, 51, 97, 182, 144, 45, 2, 55, 24, 111, 0, 181, 63, 9, 174, 88, 171, 163, 70, 124, 34, 124, 69, 132, 140, 45, 52, 156, 33, 73, 101 ...snip... 1, 68, 133, 165, 136, 33, 175, 48, 79, 135, 86, 101, 172, 29, 63, 20, 65, 107, 193, 2, 148, 118, 21, 73, 154, 4, 159, 106, 176, 82, 188, 136, 194, 4, 156, 135, 159, 158, 122, 109, 141, 112, 26, 175, 1, 7, 147, 55, 50, 74, 69, 53, 79, 105, 92, 156, 61, 61, 69, 15, 5, 108, 160, 91, 150, 92, 79, 94, 199, 58, 166, 8, 31, 163, 132, 145, 137, 82, 193, 75, 178, 163, 88, 74, 77, 25, 87, 73, 9, 171, 68, 95, 113, 91, 42, 98, 36, 50, 93, 18, 46, 118, 115, 114, 109, 99, 186, 174, 155, 13, 194, 180, 7, 78, 115, 34, 3, 8, 74, 88, 17, 32,

Expected 31, 52, 135, 123, 57, 178, 138, 28, 18, 151, 28, 183, 198, 78, 127, 115, 162, 23, 152, 195, 2, 93, 96, 27, 61, 152, 130, 65, 91, 118, 158, 167, 142, 69, 173, 176, 175, 197, 94, 65, 114, 84, 185, 66, 4, 57, 2, 125, 156, 85, 159, 54, 176, 7, 173, 75, 106, 63, 121, 39, 115, 117, 59, 41, 29, 99, 111, 122, 95, 184, 79, 159, 109, 110, 187, 196, 119, 135, 115, 34, 131, 75, 102, 57, 133, 109, 100, 10, 37, 96, 173, 137, 106, 164, 188, 183, 172, 47, 179, 164, 189, 160, 171, 75, 112, 50, 165, 173, 136, 73, 58, 117, 25, 138, 123, 153, 98, 57, 61, 157, 129, 10, 175, 172, 111, 122, 151, 137, 102, 158, 25, 138, 40, 116, 17, 39, 146, 17, 156, 106, 57, 66, 162, 175, 131, 31, 63, 93, 74, 29, 18, 14, 76, 171, 13, 124, 22, 112, 70, 108, 91, 91, 109, 159, 175, 82, 167, 142, 81, 95, 98, 135, 16, 192, 99, 182, 77, 30, 69, 125, 82, 65, 66, 142, 169, 137, 142, 56, 64, 184, 50, 9, 27, 142, 135, 107, 11, 77, 171, 26, 158, 158, 9, 116, 110, 51, 124, 162, 150, 71, 20, 63, 27, 11, 125, 46, 63, 171, 67, 177, 140, 56, 163, 143, 191, 55, 190, 37, 171, 74, 183, 49, 175, 157, 183, 74, 114, 75, 30, 100, 95, 106, 85, 35, 156, 149, 114, 14, 7, 81, 180, 134, 130, 10, 120, 71, 62, 158, 187, 78, 95, 154, 161, 35, 199, 196, 141, 81, 149, 64, 145, 132, 119, 39, 49, 74, 197, 54, 163, 165, 144, 163, 129, 184, 27, 28, 3, 176, 177, 27, 54, 101, 31, 29, 130, 129, 19, 91, 123, 176, 78, 51, 101, 89, 126, 55, 117, 52, 54, 101, 30, 4, 146, 57, 10, 23, 166, 56, 26, 67, 102, 22, 175, 115, 108, 139, 121, 131, 189, 42, 184, 176, 77, 194, 66, 91, 12, 16, 116, 184, 144, 36, 180, 194, 13, 155, 174, 186, 99, 109, 78, 111, 0, 16, 150, 72, 29, 61, 168, 168, 156, 33, 6, 41, 34, 94, 111, 84, 138, 107, 93, 17, 83, 131, 79, 29, 60, 31, 170, 163, 114, 1, 5, 88, 129, 192, 51, 97, 182, 144, 45, 2, 55, 24, 111, 0, 181, 63, 9, 174, 88, 171, 163, 70, 124, 34, 124, 69, 132, 140, 45, 52, 156, 33, 73, 101, 146, 103, ...snip... 103, 146, 101, 73, 33, 156, 52, 45, 140, 132, 69, 124, 34, 124, 70, 163, 171, 88, 174, 9, 63, 181, 0, 111, 24, 55, 2, 45, 144, 182, 97, 51, 192, 129, 88, 5, 1, 114, 163, 170, 31, 60, 29, 79, 131, 83, 17, 95, 97, 42, 24, 117, 66, 163, 191, 93, 107, 138, 84, 111, 94, 34, 41, 6, 33, 156, 168, 168, 61, 29, 72, 150, 16, 0, 111, 78, 36, 144, 184, 116, 16, 12, 91, 66,

Got 31, 52, 135, 123, 57, 178, 138, 28, 18, 151, 28, 183, 198, 78, 127, 115, 162, 23, 152, 195, 2, 93, 96, 27, 61, 152, 130, 65, 91, 118, 158, 167, 142, 69, 173, 176, 175, 197, 94, 65, 114, 84, 185, 66, 4, 57, 2, 125, 156, 85, 159, 54, 176, 7, 173, 75, 106, 63, 121, 39, 115, 117, 59, 41, 29, 99, 111, 122, 95, 184, 79, 159, 109, 110, 187, 196, 119, 135, 115, 34, 131, 75, 102, 57, 133, 109, 100, 10, 37, 96, 89, 158, 194, 3, 178, 195, 102, 140, 173, 137, 106, 164, 188, 183, 172, 47, 179, 164, 189, 160, 171, 75, 112, 50, 165, 173, 136, 73, 58, 117, 25, 138, 123, 153, 98, 57, 61, 157, 129, 10, 175, 172, 111, 122, 151, 137, 102, 158, 25, 138, 40, 116, 17, 39, 146, 17, 156, 106, 57, 66, 162, 175, 131, 31, 63, 93, 74, 29, 18, 14, 76, 171, 13, 124, 22, 112, 70, 108, 91, 91, 109, 159, 175, 82, 167, 142, 81, 95, 98, 135, 16, 192, 99, 182, 77, 30, 69, 125, 82, 65, 66, 142, 169, 137, 142, 56, 64, 184, 50, 9, 27, 142, 135, 107, 11, 77, 171, 26, 158, 158, 9, 116, 110, 51, 124, 162, 150, 71, 20, 63, 27, 11, 125, 46, 63, 171, 67, 177, 140, 56, 163, 143, 191, 55, 190, 37, 171, 74, 183, 49, 175, 157, 183, 74, 114, 75, 30, 100, 95, 106, 85, 35, 156, 149, 114, 14, 7, 81, 180, 134, 130, 10, 120, 71, 62, 158, 187, 78, 95, 154, 161, 35, 199, 196, 141, 81, 149, 64, 145, 132, 119, 39, 49, 74, 197, 54, 163, 165, 144, 163, 129, 184, 27, 28, 3, 176, 177, 27, 54, 101, 31, 29, 130, 129, 19, 91, 123, 176, 78, 51, 101, 89, 126, 55, 117, 52, 54, 101, 30, 4, 146, 57, 10, 23, 166, 56, 26, 67, 102, 22, 175, 115, 108, 139, 121, 131, 189, 42, 184, 176, 77, 194, 66, 91, 12, 16, 116, 184, 144, 36, 180, 194, 13, 155, 174, 186, 99, 109, 78, 111, 0, 16, 150, 72, 29, 61, 168, 168, 156, 33, 6, 41, 34, 94, 111, 84, 138, 107, 93, 191, 163, 66, 117, 24, 42, 97, 95, 17, 83, 131, 79, 29, 60, 31, 170, 163, 114, 1, 5, 88, 129, 192, 51, 97, 182, 144, 45, 2, 55, 24, 111, 0, 181, 63, 9, 174, 88, 171, 163, 70, 124, 34, 124, 69, 132, 140, 45, 52, 156, 33, 73, 101, 146, 103, ...snip... 103, 146, 101, 73, 33, 156, 52, 45, 140, 132, 69, 124, 34, 124, 70, 163, 171, 88, 174, 9, 63, 181, 0, 111, 24, 55, 2, 45, 144, 182, 97, 51, 192, 129, 88, 5, 1, 114, 163, 170, 31, 60, 29, 79, 131, 83, 17, 95, 97, 42, 24, 117, 66, 163, 191, 93, 107, 138, 84, 111, 94, 34, 41, 6, 33, 156, 168, 168, 61, 29, 72, 150, 16, 0, 111, 78, 109, 99, 186, 174, 155, 13, 194, 180, 36, 144, 184, 116, 16, 12, 91, 66,

Got

Test 171, 56, 128, 52, 102, 65, 71, 77, 45, 98, 99, 193, 75, 22, 54, 39, 150, 148, 110, 106, 183, 105, 156, 122, 176, 58, 38, 151, 101, 45, 32, 7, 165, 151, 62, 50, 75, 115, 181, 60, 184, 73, 11, 28, 11, 38, 67, 50, 60, 83, 45, 46, 61, 40, 30, 126, 10, 130, 68, 72, 195, 178, 21, 17, 39, 144, 161, 37, 43, 120, 108, 105, 20, 196, 112, 196, 105, 149, 81, 141, 196, 199, 35, 161, 154, 34, 75, 53, 84, 119, 157, 81, 11, 52, 181, 28, 2, 56, 164, 178, 83, 95, 50, 62, 57, 74, 151, 179, 161, 54, 189, 34, 185, 137, 116, 19, 190, 106, 142, 110, 49, 113, 101, 172, 137, 191, 193, | 171, 37, 190, 55, 191, 143, 163, 56, 98, 23, 39, 110, 103, 134, 53, 13, 78, 66, 13, 82, 102, 50, 71, 23, 135, 33, 162, 150, 167, 137, 31, 196, 63, 33, 184, 45, 72, 185, 80, 50, 81, 74, 140, 146, 93, 124, 147, 8, 137, 10, 130, 113, 180, 145, 2, 9, 138, 137, 198, 127, 170, 59, 32, 165, 182, 172, 12, 140, 146, 104, 55, 0, 121, 11, 185, 88, 53, 100, 89, 194, 46, 155, 47, 20, 141, 148, 88, 13, 137, 36, 133, 37, 138, 107, 174, 178, 44, 131, 69, 124, 85, 88, 133, 92, 66, 113, 93, 105, 39, 138, 25, 158, 102, 137, 151, 122, 54, 167, 98, 151, 90, 191, 195, 3, 107, 16, 130, 133, 152, 152, 57, 104, 10, 199, 25, 64, 158, 28, 12, 96, 137, 105, 4, 68, 149, 176, 179, 27, 84, 182, 114, 34, 98, 175, 46, 165, 7, 18, 164, 106, 137, 173, 140, 102, 195, 159, 198, 101, 30, 11, 155, 168, 133, 99, 124, 132, 152, 68, 74, 123, 76, 17, 14, 182, 11, 7, 113, 91, 77, 65, 111, 81, 113, 197, 82, 144, 71, 126, 68, 124, 176, 172, 197, 124, 40, 193, 78, 149, 34, 76, 68, 29, 60, 108, 98, 29, 69, 173, 144, 158, 109, 175, 40, 167, 44, 120, 163, 117, 30, 94, 23, 117, 156, 162, 188, 190, 198, 161, 47, 158, 118, 91, 65, 130, 152, 61, 27, 3, 25, 165, 78, 7, 187, 187, 78, 33, 15, 174, 57, 34, 45, 100, 76, 77, 136, 127, 78, 198, 183, 28, 151, 18, 28, 103, 136, 135, 95, 55, 38, 167, 100, 118, 105, 127, 33, 125, 191, 139, 77, 45, 160, 122, 161, 64, 18, 27, 7, 152, 28, 64, 26, 193, 145, 80, 53, 125, 140, 114, 165, 160, 146, 19, 118, 51, 81, 149, 74, 1, 99, 187, 64, 161, 116, 19, 177, 61, 122, 20, 199, 50, 57, 95, 113, 139, 6, 32, 198, 181, 154, 142, 164, 145, 120, 67, 167, 5, 1, 132, 157, 11, 115, 128, 181, 114, 165, 74, 112, 189, 108, 48, 52, 183, 17, 80, 160, 125, 188, 144, 134, 194, 37, 165, 180, 157, 123, 40, 61, 182, 19, 10, 158, 40, 55, 0, 78, 140, 168, 161, 126, 37, 183, 60, 46, 93, 141, 160, 184, 113, 162, 199, 192, 0, 139, 50, 196, 98, 111, 19, 97, 174, 37, 79, 119, 188, 94, 98, 85, 52, 88, 16, 183, 191, 86, 65, 23, 109, 186, 124, 27, 22, 12, 167, 110, 13, 48, 134, 128, 113, 75, 178, 170, 198, 142, 36, 93, 125, 182, 58, 59, 47, 130, 153, 121, 23, 31, 181, 122, 192, 58, 52, 111, 140, 68, 57, 126, 16, 106, 144, 57, 84, 157, 85, 33, 79, 118, 18, 114, 90, 88, 57, 163, 147, 164, 137, 77, 33, 199, 96, 168, 84, 183, 38, 74, 182,

Expected 194, 77, 176, 184, 42, 189, 131, 121, 139, 108, 115, 175, 22, 102, 67, 26, 56, 166, 23, 10, 57, 146, 4, 30, 101, 54, 52, 117, 55, 126, 89, 101, 51, 78, 176, 123, 91, 19, 129, 130, 29, 31, 101, 54, 27, 177, 176, 3, 28, 27, 184, 129, 163, 144, 165, 163, 54, 197, 74, 49, 39, 119, 132, 145, 64, 95, 78, 187, 158, 62, 71, 120, 10, 130, 134, 180, 81, 7, 14, 114, 149, 156, 35, 85, 106, 95, 100, 30, 75, 114, 74, 183, 157, 175, 49, 183, 74, 140, 177, 67, 171, 63, 46, 125, 11, 27, 63, 20, 71, 150, 162, 124, 51, 110, 116, 9, 158, 158, 26, 171, 77, 11, 107, 135, 142, 27, 9, 50, 184, 64, 56, 142, 137, 169, 142, 66, 65, 82, 125, 69, 30, 77, 182, 99, 192, 16, 135, 98, 95, 81, 142, 167, 82, 175, 159, 109, 91, 91, 108, 70, 112, 22, 124, 13, 171, 76, 14, 18, 29, 74, 93, 63, 31, 131, 175, 162, 66, 57, 106, 156, 17, 146, 39, 17, 116, 40, 111, 172, 175, 10, 129, 157, 61, 57, 98, 153, 123, 138, 25, 117, 58, 73, 136, 173, 165, 50, 112, 75, 171, 160, 189, 164, 179, 47, 172, 183, 188, 178, 3, 194, 158, 89, 96, 37, 10, 100, 109, 133, 57, 102, 75, 131, 34, 115, 135, 119, 196, 187, 110, 109, 159, 79, 184, 95, 122, 111, 99, 29, 41, 59, 117, 115, 39, 121, 63, 106, 75, 173, 7, 176, 54, 159, 85, 156, 125, 2, 57, 4, 66, 185, 84, 114, 65, 94, 197, 175, 176, 173, 69, 142, 167, 96, 93, 2, 195, 152, 23, 162, 115, 138, 178, 57, 123, 135, 52, 31, 100, 4, 86, 133, 183, 149, 187, 168, 104, 116, 79, 197, 195, 93, 144, 13, 65, 93, 4, 158, 175, 99, 9, 146, 66, 160, 81, 8, 160, 57, 130, 134, 139, 135, 33, 187, 77, 110, 173, 46, 150, 57, 186, 32, 1, 82, 40, 147, 2, 189, 70, 21, 55, 97, 164, 196, 124, 185, 144, 63, 30, 89, 157, 150, 79, 76, 58, 180, 134, 171, 56, 28, 42, 167, 79, 130, 63, 58, 154, 116, 88, 115, 89, 48, 174, 89, 86, 31, 145, 138, 170, 114, 86, 4, 121, 115, 176, 83, 124, 95, 74, 20, 111, 35, 125, 129, 195, 109, 198, 173, 6, 60, 155, 74, 160, 49, 190, 113, 15, 55, 185, 34, 127, 42, 35, 109, 67, 52, 19, 159, 7, 133, 124, 32, 50, 163, 48, 85, 111, 199, 79, 33, 25, 117, 21, 184, 158, 70,

194, 77, 176, 184, 42, 189, 131, 121, 139, 108, 115, 175, 22, 102, 67, 26, 56, 166, 23, 10, 57, 146, 4, 30, 101, 54, 52, 117, 55, 126, 89, 101, 51, 78, 176, 123, 91, 19, 129, 130, 29, 31, 101, 54, 27, 177, 176, 3, 28, 27, 184, 129, 163, 144, 165, 163, 54, 197, 74, 49, 39, 119, 132, 145, 64, 149, 81, 141, 196, 199, 35, 161, 154, 95, 78, 187, 158, 62, 71, 120, 10, 130, 134, 180, 81, 7, 14, 114, 149, 156, 35, 85, 106, 95, 100, 30, 75, 114, 74, 183, 157, 175, 49, 183, 74, 171, 37, 190, 55, 191, 143, 163, 56, 140, 177, 67, 171, 63, 46, 125, 11, 27, 63, 20, 71, 150, 162, 124, 51, 110, 116, 9, 158, 158, 26, 171, 77, 11, 107, 135, 142, 27, 9, 50, 184, 64, 56, 142, 137, 169, 142, 66, 65, 82, 125, 69, 30, 77, 182, 99, 192, 16, 135, 98, 95, 81, 142, 167, 82, 175, 159, 109, 91, 91, 108, 70, 112, 22, 124, 13, 171, 76, 14, 18, 29, 74, 93, 63, 31, 131, 175, 162, 66, 57, 106, 156, 17, 146, 39, 17, 116, 40, 138, 25, 158, 102, 137, 151, 122, 111, 172, 175, 10, 129, 157, 61, 57, 98, 153, 123, 138, 25, 117, 58, 73, 136, 173, 165, 50, 112, 75, 171, 160, 189, 164, 179, 47, 172, 183, 188, 164, 106, 137, 173, 140, 102, 195, 178, 3, 194, 158, 89, 96, 37, 10, 100, 109, 133, 57, 102, 75, 131, 34, 115, 135, 119, 196, 187, 110, 109, 159, 79, 184, 95, 122, 111, 99, 29, 41, 59, 117, 115, 39, 121, 63, 106, 75, 173, 7, 176, 54, 159, 85, 156, 125, 2, 57, 4, 66, 185, 84, 114, 65, 94, 197, 175, 176, 173, 69, 142, 167, 158, 118, 91, 65, 130, 152, 61, 27, 96, 93, 2, 195, 152, 23, 162, 115, 127, 78, 198, 183, 28, 151, 18, 28, 138, 178, 57, 123, 135, 52, 31, 100, 4, 86, 133, 183, 149, 187, 168, 104, 28, 64, 26, 193, 145, 80, 53, 125, 116, 79, 197, 195, 93, 144, 13, 65, 19, 177, 61, 122, 20, 199, 50, 57, 93, 4, 158, 175, 99, 9, 146, 66, 160, 81, 8, 160, 57, 130, 134, 139, 135, 74, 112, 189, 108, 48, 52, 183, 17, 33, 187, 77, 110, 173, 46, 150, 57, 186, 32, 1, 82, 40, 147, 2, 189, 70, 21, 55, 97, 164, 196, 124, 185, 144, 63, 30, 89, 157, 150, 79, 76, 58, 180, 134, 171, 56, 28, 42, 167, 79, 130, 63, 58, 154, 116, 88, 115, 89, 48, 174, 89, 86, 31, 145, 138, 170, 114, 86, 4, 121, 115, 176, 83, 124, 95, 74, 20, 111, 35, 125, 129, 195, 109, 198, 173, 6, 60, 155, 74, 160, 49, 190, 113, 15, 55, 185, 34, 127, 42, 35, 109, 67, 52, 19, 159, 7, 133, 124, 32, 50, 163, 48, 85, 111, 199, 88, 57, 163, 147, 164, 137, 77, 33, 79, 33, 25, 117, 21, 184, 158, 70,

Expected Got Test 196, 104, 15, 192, 101, 98, 38, 156, 128, 75, 106, 128, 112, 128, 11, 5, 128, 75, 106, 128, 112, 128, 11, 5, 192, 133, 170, 72, 178, 112, 142, 130, 114, 97, 33, 109, 147, 180, 1, 179, 114, 97, 33, 109, 147, 180, 1, 179, 21, 128, 147, 41, 162, 82, 126, 15, 21, 128, 147, 41, 162, 82, 126, 15, 133, 131, 5, 56, 7, 160, 85, 21, 193, 92, 173, 67, 148, 68, 92, 85, 91, 187, 96, 136, 99, 24, 189, 102, 9, 30, 96, 136, 99, 24, 189, 102, 9, 30, 164, 3, 85, 51, 88, 20, 121, 50, 169, 123, 199, 32, 135, 14, 182, 9, 135, 123, 199, 32, 135, 14, 182, 9, 135, 31, 16, 111, 119, 195, 53, 165, 198, 52, 61, 4, 23, 85, 29, 10, 70, 61, 52, 61, 4, 23, 85, 29, 10, 70, 61, 184, 168, 111, 63, 117, 83, 44, 65, 192, 125, 199, 22, 51, 29, 91, 98, 192, 125, 199, 22, 51, 29, 91, 98, 20, 92, 94, 135, 178, 133, 141, 163, 159, 5, 177, 176, 170, 119, 66, 21, 159, 5, 177, 176, 170, 119, 66, 21, 129, 156, 130, 78, 152, 103, 91, 51, 129, 156, 130, 78, 152, 103, 91, 51, 75, 128, 82, 51, 150, 23, 120, 44, 188, 187, 93, 37, 63, 99, 58, 53, 1, 157, 155, 27, 15, 154, 146, 106, 7, 157, 155, 27, 15, 154, 146, 106, 7, 80, 191, 174, 146, 126, 11, 196, 111, 170, 81, 141, 39, 29, 73, 70, 188, 170, 81, 141, 39, 29, 73, 70, 188, 126, 162, 169, 175, 74, 168, 99, 103, 62, 160, 7, 166, 77, 96, 35, 125, 33, 62, 160, 7, 166, 77, 96, 35, 125, 33, 136, 28, 97, 64, 74, 81, 10, 87, 117, 166, 95, 111, 40, 30, 186, 31, 33, 166, 95, 111, 40, 30, 186, 31, 33, 41, 54, 110, 193, 43, 137, 26, 8, 159, 94, 129, 48, 105, 114, 198, 171, 141, 94, 129, 48, 105, 114, 198, 171, 141, 29, 77, 115, 7, 110, 60, 81, 0, 148, 79, 113, 134, 0, 42, 135, 39, 21, 79, 113, 134, 0, 42, 135, 39, 21, 187, 137, 193, 189, 95, 35, 172, 42, 130, 106, 96, 111, 179, 104, 52, 94, 130, 106, 96, 111, 179, 104, 52, 94, 12, 18, 58, 11, 56, 180, 188, 44, 16, 38, 9, 178, 180, 127, 11, 87, 65, 45, 38, 9, 178, 180, 127, 11, 87, 65, 45, 125, 39, 146, 195, 72, 120, 113, 172, 104, 49, 44, 120, 170, 138, 3, 103, 104, 49, 44, 120, 170, 138, 3, 103, 176, 72, 16, 3, 46, 41, 64, 125, 180, 93, 19, 84, 88, 118, 98, 36, 28, 194, 93, 19, 84, 88, 118, 98, 36, 28, 194, 98, 144, 147, 1, 104, 76, 41, 166, 38, 166, 199, 74, 186, 121, 90, 28, 77, 166, 199, 74, 186, 121, 90, 28, 77, 151, 72, 41, 69, 87, 126, 87, 23, 72, 70, 13, 192, 102, 188, 173, 81, 16, 70, 13, 192, 102, 188, 173, 81, 16, 92, 112, 49, 92, 64, 109, 104, 17, 146, 97, 70, 23, 164, 170, 49, 48, 146, 97, 70, 23, 164, 170, 49, 48, 124, 93, 125, 19, 167, 97, 123}; 61, 40, 195, 59, 190, 122, 118, 120, 61, 40, 195, 59, 190, 122, 118, 120, LLNode\* head = 191, 39, 84, 104, 93, 179, 40, 69, 191, 39, 84, 104, 93, 179, 40, 69, LLNode::createWithIterators(arr, arr + 100, 147, 59, 140, 77, 36, 88, 97, 100, 147, 59, 140, 77, 36, 88, 97, 18, 160, 66, 4, 48, 115, 197, 146, 18, 160, 66, 4, 48, 115, 197, 146, sizeof(arr) / sizeof(int)); LLNode::printList(head); 53, 29, 11, 47, 43, 185, 49, 59, 84, 53, 29, 11, 47, 43, 185, 49, 59, 84, cout << "\n"; 61, 82, 58, 39, 74, 194, 112, 171, 61, 82, 58, 39, 74, 194, 112, 171, LLNode\* newhead = 30, 126, 116, 35, 119, 4, 4, 73, 171, 30, 126, 116, 35, 119, 4, 4, 73, 171, 78, 1, 31, 126, 75, 148, 10, 115, 78, 1, 31, 126, 75, 148, 10, 115, reverseLinkedList(head); LLNode::printList(newhead); 152, 145, 128, 15, 179, 51, 181, 34, 152, 145, 128, 15, 179, 51, 181, 34, 98, 64, 0, 143, 162, 198, 180, 141, newhead->clear(); 98, 64, 0, 143, 162, 198, 180, 141, 59, 134, 21, 38, 115, 120, 73, 32, 59, 134, 21, 38, 115, 120, 73, 32, 72, 119, 24, 179, 27, 5, 173, 98, 98, 72, 119, 24, 179, 27, 5, 173, 98, 98, 162, 22, 21, 86, 161] 162, 22, 21, 86, 161] int arr[] = {68, 67, 36, 184, 137, 30, [68, 67, 36, 184, 137, 30, 103, 195, [68, 67, 36, 184, 137, 30, 103, 195, 103, 195, 31, 125, 116, 61, 46, 46, 31, 125, 116, 61, 46, 46, 145, 99, 4, 31, 125, 116, 61, 46, 46, 145, 99, 4, 117, 183, 27, 173, 49, 116, 20, 178, 117, 183, 27, 173, 49, 116, 20, 178, 145, 99, 4, 117, 183, 27, 173, 49, 116, 20, 178, 55, 14, 99, 167, 88, 89, 55, 14, 99, 167, 88, 89, 100, 162, 55, 14, 99, 167, 88, 89, 100, 162, 100, 162, 79, 59, 117, 72, 61, 149, 79, 59, 117, 72, 61, 149, 193, 146, 79, 59, 117, 72, 61, 149, 193, 146, 193, 146, 24, 172, 148, 25, 121, 98, 24, 172, 148, 25, 121, 98, 58, 85, 24, 172, 148, 25, 121, 98, 58, 85, 58, 85, 86, 199, 45, 180, 24, 67, 167, 86, 199, 45, 180, 24, 67, 167, 121, 86, 199, 45, 180, 24, 67, 167, 121, 121, 13, 88, 116, 99, 96, 188, 147, 13, 88, 116, 99, 96, 188, 147, 152, 13, 88, 116, 99, 96, 188, 147, 152, 152, 23, 37, 15, 10, 13, 160, 89, 184, 23, 37, 15, 10, 13, 160, 89, 184, 57, 23, 37, 15, 10, 13, 160, 89, 184, 57, 57, 67, 89, 40, 24, 81, 117, 28, 63, 67, 89, 40, 24, 81, 117, 28, 63, 158, 67, 89, 40, 24, 81, 117, 28, 63, 158, 158, 168, 10, 115, 172, 78, 136, 60, 168, 10, 115, 172, 78, 136, 60, 149, 168, 10, 115, 172, 78, 136, 60, 149, 149, 7, 192, 63, 66, 179, 64, 155, 7, 192, 63, 66, 179, 64, 155, 131, 7, 192, 63, 66, 179, 64, 155, 131, 131, 125, 54, 62, 96, 99, 98, 33, 175, 125, 54, 62, 96, 99, 98, 33, 175, 125, 54, 62, 96, 99, 98, 33, 175, 148, 156, 193, 167, 115, 199, 96, 77, 148, 156, 193, 167, 115, 199, 96, 77, 148, 156, 193, 167, 115, 199, 96, 77, 68, 174, 83, 173, 180, 71, 45, 147, 68, 174, 83, 173, 180, 71, 45, 147, 68, 174, 83, 173, 180, 71, 45, 147, 173, 125, 197, 130, 162, 50, 147, 53, 173, 125, 197, 130, 162, 50, 147, 53, 173, 125, 197, 130, 162, 50, 147, 53, 144, 188, 184, 52, 190, 199, 70, 25, 144, 188, 184, 52, 190, 199, 70, 25, 144, 188, 184, 52, 190, 199, 70, 25, 167, 76, 70, 132, 85, 169, 145, 60, 167, 76, 70, 132, 85, 169, 145, 60, 167, 76, 70, 132, 85, 169, 145, 60, 88, 128, 89, 119, 55, 100, 129, 155, 88, 128, 89, 119, 55, 100, 129, 155, 88, 128, 89, 119, 55, 100, 129, 155, 158, 98, 2, 125, 192, 53, 151, 99, 158, 98, 2, 125, 192, 53, 151, 99, 158, 98, 2, 125, 192, 53, 151, 99, 199, 4, 155, 93, 27, 95, 106, 65, 23, 199, 4, 155, 93, 27, 95, 106, 65, 23, 199, 4, 155, 93, 27, 95, 106, 65, 23, 88, 189, 88, 114, 127, 90, 98, 116, 88, 189, 88, 114, 127, 90, 98, 116, 88, 189, 88, 114, 127, 90, 98, 116, 137, 156, 25, 143, 65, 190, 197, 177, 137, 156, 25, 143, 65, 190, 197, 177, 137, 156, 25, 143, 65, 190, 197, 177, 15, 14, 131, 151, 81, 104, 84, 67, 15, 14, 131, 151, 81, 104, 84, 67, 15, 14, 131, 151, 81, 104, 84, 67, 111, 183, 155, 193, 187, 59, 63, 7, 111, 183, 155, 193, 187, 59, 63, 7, 111, 183, 155, 193, 187, 59, 63, 7, 185, 56, 50, 115, 163, 92, 169, 113, 185, 56, 50, 115, 163, 92, 169, 113, 185, 56, 50, 115, 163, 92, 169, 113, 48, 107, 13, 141, 62, 22, 17, 190, 48, 107, 13, 141, 62, 22, 17, 190, 48, 107, 13, 141, 62, 22, 17, 190, 197, 137, 132, 12, 38, 124, 49, 28, 197, 137, 132, 12, 38, 124, 49, 28, 197, 137, 132, 12, 38, 124, 49, 28,

92, 109, 110, 33, 106, 131, 75, 77,

110, 38, 3, 24, 92, 125, 103, 111,

92, 109, 110, 33, 106, 131, 75, 77,

110, 38, 3, 24, 92, 125, 103, 111,

92, 109, 110, 33, 106, 131, 75, 77,

110, 38, 3, 24, 92, 125, 103, 111,

Test 149, 0, 73, 73, 153, 0, 14, 94, 139, 139, 48, 10, 21, 12, 51, 1, 108, 35, 134, 178, 44, 73, 172, 169, 15, 71, 172, 168, 26, 15, 117, 85, 41, 122, 198, 82, 60, 147, 5, 97, 49, 189, 135, 198, 53, 17, 64, 82, 165, 2, 170, 53, 186, 149, 19, 28, 196, 154, 10, 163, 6, 136, 147, 52, 171, 161, 52, 137, 102, 73, 62, 142, 48, 149, 152, 123, 22, 137, 184, 41, 17, 179, 68, 106, 115, 174, 160, 133, 198, 153, 48, 18, 63, 178, 17, 132, 163, 37, 99, 133, 88, 33, 73, 118, 167, 188, 28, 87, 177, 54, 165, 19, 160, 68, 10, 176, 71, 46, 163, 46, 4, 99, 117, 101, 61, 11, 134, 156, 17, 134, 10, 119, 161, 99, 118, 185, 47, 35, 99, 18, 125, 95, 5, 35, 0, 71, 85, 24, 94, 44, 115, 28, 15, 24, 16, 163, 89, 125, 163, 28, 150, 4, 91, 70, 153, 23, 124, 78, 110, 120, 197, 69, 74, 108, 130, 110, 91, 122, 117, 105, 49, 64, 58, 153, 174, 88, 50, 189, 33, 55, 153, 93, 185, 63, 148, 51, 128, 109, 77, 5, 54, 173, 130, 80, 152, 52, 146, 79, 65, 87, 97, 28, 95, 82, 14, 165, 33, 188, 27, 147, 152, 52, 146, 79, 65, 87, 97, 28, 95, 40, 185, 6, 135, 59, 159, 30, 86, 111, 109, 111, 151, 22, 121, 137, 18, 24, 105, 149, 44, 160, 196, 27, 128, 89, 59, 0, 152, 192, 50, 155, 132, 51, 19, 105, 149, 44, 160, 196, 27, 128, 89, 42, 145, 18, 108, 17, 86, 21, 191, 83, 36, 71, 156, 99, 172, 9, 26, 157, 53, 2, 115, 169, 198, 46, 169, 80, 105, 132, 99, 82, 160, 68, 5, 39, 60, 192, 23, 92, 188, 139, 4, 169, 27, 32, 37, 64, 157, 60, 87, 169, 59, 118, 139, 28, 117, 78, 69, 174, 160, 4, 63, 23, 144, 122, 175, 91, 184, 149, 182, 81, 55, 72, 146, 64, 61, 17, 158, 48, 110, 120, 48, 8, 22, 189, 164, 12, 94, 57, 199, 185, 126, 176, 199, 100, 84, 174, 17, 158, 48, 110, 120, 48, 8, 22, 145, 111, 132, 40, 130, 38, 136, 92, 98, 186, 81, 83, 6, 75, 159, 61, 45, 147, 77, 166, 182, 192, 193, 152, 184, 42, 51, 129, 193, 167, 99, 174, 11, 3, 24, 57, 12, 124, 174, 63, 125, 133, 176, 28, 173, 0, 23, 19, 135, 114, 33, 129, 193, 167, 99, 174, 11, 3, 24, 17, 89, 186, 133, 26, 190, 122, 158, 150, 71, 185, 142, 109, 85, 119, 157, 104, 2, 139, 170, 146, 169, 130, 137, 103, 11, 185, 46, 91, 20, 125, 105, 86, 109, 40, 59, 167, 75, 191, 176, 7, 119, 145, 148, 184, 64, 35, 67, 101, 110, 114, 180, 196, 96, 17, 165, 193, 8, 92, 61, 100, 53, 179, 150, 62, 98, 107, 74, 96, 5, 97, 144, 149, 91, 185, 14, 41, 122, 142, 97, 41, 7, 155, 51, 93, 112, 121, 36, 68, 53, 90, 60, 198, 171, 29, 32, 112, 16, 75, 171, 92, 134, 82, 39, 199, 138, 103, 92, 111, 52, 58, 32, 132, 68, 100, 87, 149, 179, 60, 29, 143, 160, 82, 122, 66, 20, 52, 86, 149, 16, 136, 165, 131, 93, 0, 180, 157, 12, 172, 93, 122, 199, 45, 95, 156, 31, 94, 186, 5, 136, 82, 122, 66, 20, 52, 86, 149, 16,

Expected 149, 0, 73, 73, 153, 0, 14, 94, 139, 139, 48, 10, 21, 12, 51, 1, 108, 35, 134, 178, 44, 73, 172, 169, 15, 71, 172, 168, 26, 15, 117, 85, 41, 122, 198, 82, 60, 147, 5, 97, 49, 189, 135, 198, 53, 17, 64, 82, 165, 2, 170, 53, 186, 149, 19, 28, 196, 154, 10, 163, 6, 136, 147, 52, 171, 161, 52, 137, 102, 73, 62, 142, 48, 149, 152, 123, 22, 137, 184, 41, 17, 179, 68, 106, 115, 174, 160, 133, 198, 153, 48, 18, 63, 178, 17, 132, 163, 37, 99, 133, 88, 33, 73, 118, 167, 188, 28, 87, 177, 54, 165, 19, 160, 68, 10, 176, 71, 46, 163, 46, 4, 99, 117, 101, 61, 11, 134, 156, 17, 134, 10, 119, 161, 99, 118, 185, 47, 35, 99, 18, 125, 95, 5, 35, 0, 71, 85, 24, 94, 44, 115, 28, 15, 24, 16, 163, 89, 125, 163, 28, 150, 4, 91, 70, 153, 23, 124, 78, 110, 120, 197, 69, 74, 108, 130, 110, 91, 122, 117, 105, 49, 64, 58, 153, 174, 88, 50, 189, 33, 55, 153, 93, 185, 63, 148, 51, 128, 109, 77, 5, 54, 173, 130, 80, 82, 14, 165, 33, 188, 27, 147, 40, 185, 6, 135, 59, 159, 30, 86, 111, 109, 111, 151, 22, 121, 137, 18, 24, 59, 0, 152, 192, 50, 155, 132, 51, 19, 42, 145, 18, 108, 17, 86, 21, 191, 83, 36, 71, 156, 99, 172, 9, 26, 157, 53, 2, 115, 169, 198, 46, 169, 80, 105, 132, 99, 82, 160, 68, 5, 39, 60, 192, 23, 92, 188, 139, 4, 169, 27, 32, 37, 64, 157, 60, 87, 169, 59, 118, 139, 28, 117, 78, 69, 174, 160, 4, 63, 23, 144, 122, 175, 91, 184, 149, 182, 81, 55, 72, 146, 64, 61, 189, 164, 12, 94, 57, 199, 185, 126, 176, 199, 100, 84, 174, 145, 111, 132, 40, 130, 38, 136, 92, 98, 186, 81, 83, 6, 75, 159, 61, 45, 147, 77, 166, 182, 192, 193, 152, 184, 42, 51, 57, 12, 124, 174, 63, 125, 133, 176, 28, 173, 0, 23, 19, 135, 114, 33, 17, 89, 186, 133, 26, 190, 122, 158, 150, 71, 185, 142, 109, 85, 119, 157, 104, 2, 139, 170, 146, 169, 130, 137, 103, 11, 185, 46, 91, 20, 125, 105, 86, 109, 40, 59, 167, 75, 191, 176, 7, 119, 145, 148, 184, 64, 35, 67, 101, 110, 114, 180, 196, 96, 17, 165, 193, 8, 92, 61, 100, 53, 179, 150, 62, 98, 107, 74, 96, 5, 97, 144, 149, 91, 185, 14, 41, 122, 142, 97, 41, 7, 155, 51, 93, 112, 121, 36, 68, 53, 90, 60, 198, 171, 29, 32, 112, 16, 75, 171, 92, 134, 82, 39, 199, 138, 103, 92, 111, 52, 58, 32, 132, 68, 100, 87, 149, 179, 60, 29, 143, 160,

Got 149, 0, 73, 73, 153, 0, 14, 94, 139, 139, 48, 10, 21, 12, 51, 1, 108, 35, 134, 178, 44, 73, 172, 169, 15, 71, 172, 168, 26, 15, 117, 85, 41, 122, 198, 82, 60, 147, 5, 97, 49, 189, 135, 198, 53, 17, 64, 82, 165, 2, 170, 53, 186, 149, 19, 28, 196, 154, 10, 163, 6, 136, 147, 52, 171, 161, 52, 137, 102, 73, 62, 142, 48, 149, 152, 123, 22, 137, 184, 41, 17, 179, 68, 106, 115, 174, 160, 133, 198, 153, 48, 18, 63, 178, 17, 132, 163, 37, 99, 133, 88, 33, 73, 118, 167, 188, 28, 87, 177, 54, 165, 19, 160, 68, 10, 176, 71, 46, 163, 46, 4, 99, 117, 101, 61, 11, 134, 156, 17, 134, 10, 119, 161, 99, 118, 185, 47, 35, 99, 18, 125, 95, 5, 35, 0, 71, 85, 24, 94, 44, 115, 28, 15, 24, 16, 163, 89, 125, 163, 28, 150, 4, 91, 70, 153, 23, 124, 78, 110, 120, 197, 69, 74, 108, 130, 110, 91, 122, 117, 105, 49, 64, 58, 153, 174, 88, 50, 189, 33, 55, 153, 93, 185, 63, 148, 51, 128, 109, 77, 5, 54, 173, 130, 80, 152, 52, 146, 79, 65, 87, 97, 28, 95, 82, 14, 165, 33, 188, 27, 147, 40, 185, 6, 135, 59, 159, 30, 86, 111, 109, 111, 151, 22, 121, 137, 18, 24, 105, 149, 44, 160, 196, 27, 128, 89, 59, 0, 152, 192, 50, 155, 132, 51, 19, 42, 145, 18, 108, 17, 86, 21, 191, 83, 36, 71, 156, 99, 172, 9, 26, 157, 53, 2, 115, 169, 198, 46, 169, 80, 105, 132, 99, 82, 160, 68, 5, 39, 60, 192, 23, 92, 188, 139, 4, 169, 27, 32, 37, 64, 157, 60, 87, 169, 59, 118, 139, 28, 117, 78, 69, 174, 160, 4, 63, 23, 144, 122, 175, 91, 184, 149, 182, 81, 55, 72, 146, 64, 61, 17, 158, 48, 110, 120, 48, 8, 22, 189, 164, 12, 94, 57, 199, 185, 126, 176, 199, 100, 84, 174, 145, 111, 132, 40, 130, 38, 136, 92, 98, 186, 81, 83, 6, 75, 159, 61, 45, 147, 77, 166, 182, 192, 193, 152, 184, 42, 51, 129, 193, 167, 99, 174, 11, 3, 24, 57, 12, 124, 174, 63, 125, 133, 176, 28, 173, 0, 23, 19, 135, 114, 33, 17, 89, 186, 133, 26, 190, 122, 158, 150, 71, 185, 142, 109, 85, 119, 157, 104, 2, 139, 170, 146, 169, 130, 137, 103, 11, 185, 46, 91, 20, 125, 105, 86, 109, 40, 59, 167, 75, 191, 176, 7, 119, 145, 148, 184, 64, 35, 67, 101, 110, 114, 180, 196, 96, 17, 165, 193, 8, 92, 61, 100, 53, 179, 150, 62, 98, 107, 74, 96, 5, 97, 144, 149, 91, 185, 14, 41, 122, 142, 97, 41, 7, 155, 51, 93, 112, 121, 36, 68, 53, 90, 60, 198, 171, 29, 32, 112, 16, 75, 171, 92, 134, 82, 39, 199, 138, 103, 92, 111, 52, 58, 32, 132, 68, 100, 87, 149, 179, 60, 29, 143, 160, 82, 122, 66, 20, 52, 86, 149, 16,

Test 32, 169, 42, 114, 174, 88, 79, 170, 38, 160, 195, 120, 185, 65, 14, 97, 132, 160, 40, 128, 0, 18, 99, 49, 159, 87, 11, 167, 49, 97, 61, 175, 158, 183, 134, 99, 108, 54, 173, 67, 67, 71, 20, 81, 119, 135, 107, 148, 6, 11, | 0, 18, 99, 49, 159, 87, 11, 167, 49, 38, 104, 131, 90, 89, 12, 106, 111, 136, 44, 181, 167, 75, 168, 46, 176, 34, 164, 134, 107, 181, 177, 141, 147, 135, 107, 148, 6, 11, 38, 104, 131, 136, 52, 107, 30, 37, 157, 174, 108, 90, 187, 13, 125, 172, 7, 13, 48, 52, 198, 177, 26, 9, 34, 56, 91, 166, 187, 107, 181, 177, 141, 147, 136, 52, 130, 55, 94 ...snip..., 140, 0, 165, 198, 69, 114, 198, 102, 64, 18, 136, 191, 30, 160, 46, 144, 111, 11, 184, 36, 24, 72, 91, 192, 146, 51, 177, 153, 128, 84, 139, 147, 184, 3, 61, 76, 198, 158, 177, 90, 190, 146, 6, 66, 81, 17, 9, 131, 177, 116, 181, 50, 16, 105, 143, 144, 198, 142, 53, 25, 138, 135, 193, 30, 43, 123, 89, 117, 39, 118, 25, 86, 115, 195, 42, 18, 92, 136, 44, 96, 62, 151, 18, 168, 51, 121, 37, 147, 198, 6, 116, 10, 80, 163, 186, 54, 171, 83, 185, 8, 62, 105, 102, 99, 176, 156, 164, 87, 176, 44, 190, 110, 132, 141, 87, 172, 0, 129, 180, 35, 42, 91, 157, 164, 52, 9, 23, 101, 49, 137, 165, 31, 76, 152, 65, 151, 157, 94, 133, 40, 45, 30, 183, 167, 44, 13, 61, 79, 41, 25, 44, 190, 74, 44, 176, 40, 116, 136, 31, 138, 173, 21, 86, 137, 24, 18, 65, 84, 66, 49, 125, 119, 83, 133, 16, 138, 70, 40, 83, 138, 20, 160, 126, 142, 125, 129, 53, 156, 41, 170, 138, 109, 127, 145, 19, 6, 156, 151, 46, 153, 94, 100, 90, 155, 105, 90, 47, 111, 170, 29, 49, 163, 154, 78, 185, 138, 53, 12, 149, 98, 163, 84, 33, 78, 47, 50, 45, 118, 22, 25, 48, 93, 123, 167, 158, 84, 73, 93, 127, 190, 159, 69, 128, 68, 59, 116, 77, 137, 160, 99, 95, 16, 90, 120, 162, 125, 156, 130, 59, 185, 176, 102, 176, 58, 183, 179, 40, 138, 41, 53, 69, 95, 103, 16, 103, 163, 126, 98, 83, 21, 39, 38, 75, 192, 134, 102, 104, 74, 31, 113, 61, 55, 40, 70, 190, 119, 195, 104, 152, 118, 138, 146, 147, 194, 120, 37, 166, 194, 181, 7, 146, 149, 2, 118, 81, 9, 6, 182, 96, 37, 136, 135, 171, 169, 143, 106, 16, 92, 94, 117, 63, 86, 131, 101, 64, 39, 51, 4, 190, 136, 150, 116, 74, 193, 49, 170, 50, 146, 123, 102, 172, 6, 119, 139, 182, 37, 180, 114, 72, 9, 10, 35, 12, 139, 22, 38, 116, 95, 87, 166, 157, 101, 66, 88, 99, 81, 163, 196, 30, 149, 173, 161, 195, 54, 116, 141, 165, 100, 153, 117, 141, 54, 85, 81, 56, 174, 114, 100, 32, 176, 78, 11, 30, 193, 97, 12, 150, 85, 49, 73, 147, 33, 44, 181, 85, 171, 151, 70, 72, 135, 28, 99, 32, 91, 184, 120, 25, 85, 182, 192, 195, 115, 150,

Expected 136, 165, 131, 93, 0, 180, 157, 12, 172, 93, 122, 199, 45, 95, 156, 31, 94, 186, 5, 136, 32, 169, 42, 114, 174, 88, 79, 170, 38, 160, 195, 120, 185, 65, 14, 97, 132, 160, 40, 128, 97, 61, 175, 158, 183, 134, 99, 108, 54, 173, 67, 67, 71, 20, 81, 119, 90, 89, 12, 106, 111, 136, 44, 181, 167, 75, 168, 46, 176, 34, 164, 134, 107, 30, 37, 157, 174, 108, 90, 187, 13, 125, 172, 7, 13, 48, 52, 198, 177, 26, 9, 34, 56, 91, 166, 187, 130, 55, 94, 178, 10, 1 ...snip..., 10, 178, 94, 55, 130, 187, 166, 91, 56, 34, 9, 26, 177, 198, 52, 48, 13, 7, 172, 125, 13, 187, 90, 108, 174, 157, 37, 30, 107, 52, 136, 147, 141, 177, 181, 107, 134, 164, 34, 176, 46, 168, 75, 167, 181, 44, 136, 111, 106, 12, 89, 90, 131, 104, 38, 11, 6, 148, 107, 135, 119, 81, 20, 71, 67, 67, 173, 54, 108, 99, 134, 183, 158, 175, 61, 97, 49, 167, 11, 87, 159, 49, 99, 18, 0, 128, 40, 160, 132, 97, 14, 65, 185, 120, 195, 160, 38, 170, 79, 88, 174, 114, 42, 169, 32, 136, 5, 186, 94, 31, 156, 95, 45, 199, 122, 93, 172, 12, 157, 180, 0, 93, 131, 165, 136, 16, 149, 86, 52, 20, 66, 122, 82, 160, 143, 29, 60, 179, 149, 87, 100, 68, 132, 32, 58, 52, 111, 92, 103, 138, 199, 39, 82, 134, 92, 171, 75, 16, 112, 32, 29, 171, 198, 60, 90, 53, 68, 36, 121, 112, 93, 51, 155, 7, 41, 97, 142, 122, 41, 14, 185, 91, 149, 144, 97, 5, 96, 74, 107, 98, 62, 150, 179, 53, 100, 61, 92, 8, 193, 165, 17, 96, 196, 180, 114, 110, 101, 67, 35, 64, 184, 148, 145, 119, 7, 176, 191, 75, 167, 59, 40, 109, 86, 105, 125, 20, 91, 46, 185, 11, 103, 137, 130, 169, 146, 170, 139, 2, 104, 157, 119, 85, 109, 142, 185, 71, 150, 158, 122, 190, 26, 133, 186, 89, 17, 33, 114, 135, 19, 23, 0, 173, 28, 176, 133, 125, 63, 174, 124, 12, 57, 24, 3, 11, 174, 99, 167, 193, 129, 51, 42, 184, 152, 193, 192, 182, 166, 77, 147, 45, 61, 159, 75, 6, 83, 81, 186, 98, 92, 136, 38, 130, 40, 132, 111, 145, 174, 84, 100, 199, 176, 126, 185, 199, 57, 94, 12, 164, 189, 22, 8, 48, 120, 110, 48, 158, 17, 61, 64, 146, 72, 55, 81, 182, 149, 184, 91, 175, 122, 144, 23, 63, 4, 160, 174, 69, 78, 117, 28, 139, 118, 59, 169, 87, 60, 157, 64, 37, 32, 27, 169, 4, 139, 188, 92, 23, 192, 60, 39, 5, 68, 160, 82, 99, 132, 105, 80, 169, 46, 198, 169, 115, 2, 53, 157, 26, 9, 172, 99, 156, 71, 36, 83, 191, 21, 86, 17, 108, 18, 145,

Got 136, 165, 131, 93, 0, 180, 157, 12, 172, 93, 122, 199, 45, 95, 156, 31, 94, 186, 5, 136, 32, 169, 42, 114, 174, 88, 79, 170, 38, 160, 195, 120, 185, 65, 14, 97, 132, 160, 40, 128, 0, 18, 99, 49, 159, 87, 11, 167, 49, 97, 61, 175, 158, 183, 134, 99, 108, 54, 173, 67, 67, 71, 20, 81, 119, 135, 107, 148, 6, 11, 38, 104, 131, 90, 89, 12, 106, 111, 136, 44, 181, 167, 75, 168, 46, 176, 34, 164, 134, 107, 181, 177, 141, 147, 136, 52, 107, 30, 37, 157, 174, 108, 90, 187, 13, 125, 172, 7, 13, 48, 52, 198, 177, 26, 9, 34, 56, 91, 166, 187, 130, 55, 94, 178, 10, 1 ...snip..., 10, 178, 94, 55, 130, 187, 166, 91, 56, 34, 9, 26, 177, 198, 52, 48, 13, 7, 172, 125, 13, 187, 90, 108, 174, 157, 37, 30, 107, 52, 136, 147, 141, 177, 181, 107, 134, 164, 34, 176, 46, 168, 75, 167, 181, 44, 136, 111, 106, 12, 89, 90, 131, 104, 38, 11, 6, 148, 107, 135, 119, 81, 20, 71, 67, 67, 173, 54, 108, 99, 134, 183, 158, 175, 61, 97, 49, 167, 11, 87, 159, 49, 99, 18, 0, 128, 40, 160, 132, 97, 14, 65, 185, 120, 195, 160, 38, 170, 79, 88, 174, 114, 42, 169, 32, 136, 5, 186, 94, 31, 156, 95, 45, 199, 122, 93, 172, 12, 157, 180, 0, 93, 131, 165, 136, 16, 149, 86, 52, 20, 66, 122, 82, 160, 143, 29, 60, 179, 149, 87, 100, 68, 132, 32, 58, 52, 111, 92, 103, 138, 199, 39, 82, 134, 92, 171, 75, 16, 112, 32, 29, 171, 198, 60, 90, 53, 68, 36, 121, 112, 93, 51, 155, 7, 41, 97, 142, 122, 41, 14, 185, 91, 149, 144, 97, 5, 96, 74, 107, 98, 62, 150, 179, 53, 100, 61, 92, 8, 193, 165, 17, 96, 196, 180, 114, 110, 101, 67, 35, 64, 184, 148, 145, 119, 7, 176, 191, 75, 167, 59, 40, 109, 86, 105, 125, 20, 91, 46, 185, 11, 103, 137, 130, 169, 146, 170, 139, 2, 104, 157, 119, 85, 109, 142, 185, 71, 150, 158, 122, 190, 26, 133, 186, 89, 17, 33, 114, 135, 19, 23, 0, 173, 28, 176, 133, 125, 63, 174, 124, 12, 57, 24, 3, 11, 174, 99, 167, 193, 129, 51, 42, 184, 152, 193, 192, 182, 166, 77, 147, 45, 61, 159, 75, 6, 83, 81, 186, 98, 92, 136, 38, 130, 40, 132, 111, 145, 174, 84, 100, 199, 176, 126, 185, 199, 57, 94, 12, 164, 189, 22, 8, 48, 120, 110, 48, 158, 17, 61, 64, 146, 72, 55, 81, 182, 149, 184, 91, 175, 122, 144, 23, 63, 4, 160, 174, 69, 78, 117, 28, 139, 118, 59, 169, 87, 60, 157, 64, 37, 32, 27, 169, 4, 139, 188, 92, 23, 192, 60, 39, 5, 68, 160, 82, 99, 132, 105, 80, 169, 46, 198, 169, 115, 2, 53, 157, 26, 9, 172, 99, 156, 71, 36, 83, 191, 21, 86, 17, 108, 18, 145,

Expected Got Test 67, 46, 156, 147, 0, 82, 61, 68, 19, 42, 19, 51, 132, 155, 50, 192, 152, 42, 19, 51, 132, 155, 50, 192, 152, 107, 38, 64, 43, 27, 30, 95, 22, 64, 0, 59, 89, 128, 27, 196, 160, 44, 0, 59, 89, 128, 27, 196, 160, 44, 44, 14, 102, 79, 168, 91, 24, 65, 97, 149, 105, 24, 18, 137, 121, 22, 151, 149, 105, 24, 18, 137, 121, 22, 151, 171, 169, 190, 193, 161, 36, 159, 126, 111, 109, 111, 86, 30, 159, 59, 135, 111, 109, 111, 86, 30, 159, 59, 135, 23, 19, 48, 113, 193, 26, 125, 76, 6, 185, 40, 147, 27, 188, 33, 165, 6, 185, 40, 147, 27, 188, 33, 165, 14, 82, 95, 28, 97, 87, 65, 79, 146, 160, 50, 36, 184, 181, 4, 148, 37, 14, 82, 95, 28, 97, 87, 65, 79, 146, 119, 155, 84, 46, 46, 104, 64, 139, 52, 152, 80, 130, 173, 54, 5, 77, 52, 152, 80, 130, 173, 54, 5, 77, 193, 16, 23, 168, 45, 161, 128, 175, 109, 128, 51, 148, 63, 185, 93, 153, 109, 128, 51, 148, 63, 185, 93, 153, 70, 197, 126, 130, 91, 94, 98, 155, 55, 33, 189, 50, 88, 174, 153, 58, 55, 33, 189, 50, 88, 174, 153, 58, 165, 98, 48, 71, 89, 97, 108, 80, 23, 64, 49, 105, 117, 122, 91, 110, 130, 64, 49, 105, 117, 122, 91, 110, 130, 181, 7, 3, 137, 112, 20, 2, 167, 173, 108, 74, 69, 197, 120, 110, 78, 124, 108, 74, 69, 197, 120, 110, 78, 124, 136, 90, 194, 160, 130, 175, 169, 183, 23, 153, 70, 91, 4, 150, 28, 163, 23, 153, 70, 91, 4, 150, 28, 163, 159, 78, 113, 93, 160, 83, 15, 141, 125, 89, 163, 16, 24, 15, 28, 115, 125, 89, 163, 16, 24, 15, 28, 115, 136, 109, 187, 52, 73, 47, 5, 26, 135, 44, 94, 24, 85, 71, 0, 35, 5, 95, 44, 94, 24, 85, 71, 0, 35, 5, 95, 32, 75, 10, 47, 141, 79, 71, 192, 181, 125, 18, 99, 35, 47, 185, 118, 99, 125, 18, 99, 35, 47, 185, 118, 99, 122, 57, 147, 62, 101, 121, 112, 78, 161, 119, 10, 134, 17, 156, 134, 11, 161, 119, 10, 134, 17, 156, 134, 11, 61, 101, 117, 99, 4, 46, 163, 46, 71, 61, 101, 117, 99, 4, 46, 163, 46, 71, 162, 42, 34, 101, 14, 185, 195, 1, 194, 134, 186, 73, 186, 90, 84, 46, 176, 10, 68, 160, 19, 165, 54, 177, 176, 10, 68, 160, 19, 165, 54, 177, 126, 163, 0, 14, 87, 31, 120, 19, 92, 87, 28, 188, 167, 118, 73, 33, 88, 87, 28, 188, 167, 118, 73, 33, 88, 118, 77, 36, 21, 138, 19, 195, 95, 133, 99, 37, 163, 132, 17, 178, 63, 133, 99, 37, 163, 132, 17, 178, 63, 123, 45, 111, 106, 198, 17, 194, 55, 18, 48, 153, 198, 133, 160, 174, 115, 18, 48, 153, 198, 133, 160, 174, 115, 142, 63, 189, 55, 102, 198, 99, 104, 106, 68, 179, 17, 41, 184, 137, 22, 106, 68, 179, 17, 41, 184, 137, 22, 123, 152, 149, 48, 142, 62, 73, 102, 123, 152, 149, 48, 142, 62, 73, 102, 150, 48, 108, 16, 196, 175, 195, 119, 12, 96, 98, 120, 27, 71, 147, 88, 1, 137, 52, 161, 171, 52, 147, 136, 6, 137, 52, 161, 171, 52, 147, 136, 6, 35, 154, 67, 37, 187, 90, 163, 21, 163, 10, 154, 196, 28, 19, 149, 186, 163, 10, 154, 196, 28, 19, 149, 186, 105, 165, 2, 14, 86, 1, 114, 81, 102, 53, 170, 2, 165, 82, 64, 17, 53, 198, 53, 170, 2, 165, 82, 64, 17, 53, 198, 79, 98, 7, 141, 117, 44, 190, 123, 135, 189, 49, 97, 5, 147, 60, 82, 135, 189, 49, 97, 5, 147, 60, 82, 182, 157, 132, 20, 64, 5, 11, 187, 198, 122, 41, 85, 117, 15, 26, 168, 198, 122, 41, 85, 117, 15, 26, 168, 167, 112, 118, 88, 136, 164, 19, 151, 172, 71, 15, 169, 172, 73, 44, 178, 172, 71, 15, 169, 172, 73, 44, 178, 0, 187, 65, 179, 6, 43, 148, 154, 111, 134, 35, 108, 1, 51, 12, 21, 10, 48, 134, 35, 108, 1, 51, 12, 21, 10, 48, 139, 139, 94, 14, 0, 153, 73, 73, 0, 197, 119, 131, 73, 123, 1, 54, 185, 139, 139, 94, 14, 0, 153, 73, 73, 0, 149, 111, 103, 125, 92, 24, 3, 38, 93, 156, 83, 129, 62, 161, 133, 84, 149, 111, 103, 125, 92, 24, 3, 38, 58, 144, 128, 196, 58, 95, 89, 158, 110, 77, 75, 131, 106, 33, 110, 109, 110, 77, 75, 131, 106, 33, 110, 109, 76, 88, 5, 188, 5, 80, 173, 156, 48, 92, 28, 49, 124, 38, 12, 132, 137, 92, 28, 49, 124, 38, 12, 132, 137, 85, 184, 166, 100, 176, 33, 140, 96, 197, 190, 17, 22, 62, 141, 13, 107, 197, 190, 17, 22, 62, 141, 13, 107, 27, 66, 69, 194, 37, 146, 107, 161, 48, 113, 169, 92, 163, 115, 50, 56, 48, 113, 169, 92, 163, 115, 50, 56, 11, 11, 150, 135, 145, 183, 135, 3, 185, 7, 63, 59, 187, 193, 155, 183, 185, 7, 63, 59, 187, 193, 155, 183, 106, 124, 34, 158, 149, 37, 134, 61, 111, 67, 84, 104, 81, 151, 131, 14, 111, 67, 84, 104, 81, 151, 131, 14, 112, 100, 54, 70, 81, 181, 141, 134, 15, 177, 197, 190, 65, 143, 25, 156, 15, 177, 197, 190, 65, 143, 25, 156, 130, 44, 30, 26, 29, 145, 2, 45, 9, 137, 116, 98, 90, 127, 114, 88, 189, 137, 116, 98, 90, 127, 114, 88, 189, 138, 158, 97, 43, 10, 195, 106, 32, 88, 23, 65, 106, 95, 27, 93, 155, 4, 88, 23, 65, 106, 95, 27, 93, 155, 4, 121, 111, 55, 98, 141, 93, 74, 33, 199, 99, 151, 53, 192, 125, 2, 98, 199, 99, 151, 53, 192, 125, 2, 98, 111, 105, 18, 124, 128, 86, 79, 41, 158, 155, 129, 100, 55, 119, 89, 128, 158, 155, 129, 100, 55, 119, 89, 128, 14, 75, 198, 33, 162, 171, 101, 111, 88, 60, 145, 169, 85, 132, 70, 76, 88, 60, 145, 169, 85, 132, 70, 76, 100, 132, 42, 98, 25, 98, 23, 169, 167, 25, 70, 199, 190, 52, 184, 188, 167, 25, 70, 199, 190, 52, 184, 188, 140, 109, 96, 111, 18, 81, 0, 104, 74, 144, 53, 147, 50, 162, 130, 197, 125, 144, 53, 147, 50, 162, 130, 197, 125, 37, 81, 90, 21, 166, 106, 191, 170, 173, 147, 45, 71, 180, 173, 83, 174, 173, 147, 45, 71, 180, 173, 83, 174, 68, 77, 96, 199, 115, 167, 193, 156, 44, 6, 90, 174, 44, 195, 88, 154, 64, 68, 77, 96, 199, 115, 167, 193, 156, 112, 33, 61, 141, 98, 14, 91, 59, 137, 148, 175, 33, 98, 99, 96, 62, 54, 148, 175, 33, 98, 99, 96, 62, 54, 125, 131, 155, 64, 179, 66, 63, 192, 150, 118, 114, 55, 36, 108, 83, 144}; 125, 131, 155, 64, 179, 66, 63, 192, LLNode\* head = 7, 149, 60, 136, 78, 172, 115, 10, 7, 149, 60, 136, 78, 172, 115, 10, LLNode::createWithIterators(arr, arr + 168, 158, 63, 28, 117, 81, 24, 40, 168, 158, 63, 28, 117, 81, 24, 40, sizeof(arr) / sizeof(int)); 89, 67, 57, 184, 89, 160, 13, 10, 15, 89, 67, 57, 184, 89, 160, 13, 10, 15, LLNode::printList(head); 37, 23, 152, 147, 188, 96, 99, 116, 37, 23, 152, 147, 188, 96, 99, 116, cout << "\n"; 88, 13, 121, 167, 67, 24, 180, 45, 88, 13, 121, 167, 67, 24, 180, 45, 199, 86, 85, 58, 98, 121, 25, 148, 199, 86, 85, 58, 98, 121, 25, 148, LLNode\* newhead = reverseLinkedList(head); 172, 24, 146, 193, 149, 61, 72, 117, 172, 24, 146, 193, 149, 61, 72, 117, 59, 79, 162, 100, 89, 88, 167, 99, 59, 79, 162, 100, 89, 88, 167, 99, LLNode::printList(newhead); newhead->clear(); 14, 55, 178, 20, 116, 49, 173, 27, 14, 55, 178, 20, 116, 49, 173, 27, 183, 117, 4, 99, 145, 46, 46, 61, 183, 117, 4, 99, 145, 46, 46, 61, 116, 125, 31, 195, 103, 30, 137, 184, 116, 125, 31, 195, 103, 30, 137, 184, 36, 67, 68] 36, 67, 68]

Passed all tests! 🗸

(Chính xác) Điểm cho bài nộp này: 1,00/1,00.

## Câu hỏi 13

Chính xác

Điểm 1,00 của 1,00

Class LLNode representing a node of singly linked lists is declared as below:

```
class LLNode {
public:
    int val;
    LLNode* next;
    LLNode(); // Constructor: val = 0, next = nullptr
    LLNode(int val, LLNode* next); // Constructor with customized data
}
```

Given a singly linked list head node and a integer k.

Your task is to implement a function with following prototype:

```
LLNode* rotateLinkedList(LLNode* head, int k);
```

The function returns head node of the rotated singly linked list obtained after rotate the linked list to the right by k places.

#### Note:

- The iostream library has been used and namespace std is being used. No other libraries are allowed.
- The constructors and methods of class LLNode have been defined fully so you do not need to redefine them.
- You can write helper functions.

#### For example:

Test	Result
<pre>int arr[] = {2, 4, 6, 6, 3}; int k = 3; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = rotateLinkedList(head, k); LLNode::printList(newhead);</pre>	[2, 4, 6, 6, 3] [6, 6, 3, 2, 4]

Answer: (penalty regime: 0 %)

Reset answer

```
1 | LLNode* rotateLinkedList(LLNode* head, int k) {
 2
        // STUDENT ANSWER
 3
        if(head==nullptr){
 4
            return nullptr;
 5
 6
        if(head->next==nullptr){
            LLNode* ret=new LLNode(head->val,nullptr);
 7
 8
            return ret;
 9
        int length=0;
10
11
        LLNode*temp=head;
12
        while(temp!=nullptr){
13
             temp=temp->next;
14
            length++;
15
        }
        temp=head;
16
17
        k=k%length;
        LLNode*tail_part=nullptr,*temp_tail=nullptr;
18
19 •
        for(int i=0;i<length-k;i++){</pre>
20 •
             if(i==0){
21
                 tail part=new LLNode(temp->val,temp->next);
22
                 temp_tail=tail_part;
             }
23
24
            else{
                  tail snowt-now LLNado/tomn swal mullatal.
```

```
26
             temp_tail=temp_tail->next;
27
28
             temp=temp->next;
29
         }
30
         LLNode*head_part,*temp_head;
31
         head_part=new LLNode(temp->val,nullptr);
32
         temp_head=head_part;
         temp=temp->next;
33
         //int cnt=0;
34
35
         while(temp!=nullptr){
36
            temp_head->next=new LLNode(temp->val,nullptr);
            //temp_head->next->val=temp_head->val=temp->val;
37
38
            temp=temp->next;
39
            //if(temp!=nullptr)
40
            temp_head=temp_head->next;
41
            //cnt++;
42
         temp_head->next=tail_part;
43
         //cout<<"temp_headptr"<<temp_head<<endl;
//cout<<"temp_headval="<<temp_head->val<<endl;</pre>
44
45
46
         //LLNode*read=head_part;
47 •
         //while(read!=nullptr){
               cout<<read->val<<endl;</pre>
48
         //
49
               cout<<read<<endl;</pre>
         //
50
                read=read->next;
         ///
51
         //}
52
         return head_part;
53
```

	Test	Expected	Got	
~	<pre>int arr[] = {2, 4, 6, 6, 3}; int k = 3; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = rotateLinkedList(head, k); LLNode::printList(newhead);</pre>	[2, 4, 6, 6, 3] [6, 6, 3, 2, 4]	[2, 4, 6, 6, 3] [6, 6, 3, 2, 4]	*
*	<pre>int arr[] = {}; int k = 2; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = rotateLinkedList(head, k); LLNode::printList(newhead);</pre>	[]		*

Test	Expected	Got	
<pre>int arr[] = {0, 4, 2, 5, 1, 0, 6, 4, 8, 6}; int k = 11; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = rotateLinkedList(head, k); LLNode::printList(newhead);</pre>	[0, 4, 2, 5, 1, 0, 6, 4, 8, 6] [6, 0, 4, 2, 5, 1, 0, 6, 4, 8]	[0, 4, 2, 5, 1, 0, 6, 4, 8, 6] [6, 0, 4, 2, 5, 1, 0, 6, 4, 8]	
<pre>int arr[] = {6, 1, 3, 2, 6, 0, 0, 0, 0, 3, 3, 9, 8, 5, 6, 0, 7, 7, 8, 5, 7, 7, 9, 6, 3, 3, 0, 0, 8, 0, 0, 4, 9, 7, 1, 7, 2, 7, 5, 4, 4, 7, 5, 9, 2, 4, 5, 7, 9, 7, 9, 7, 2, 0, 6, 7, 6, 5, 1, 9, 7, 1, 2, 7, 8, 7, 5, 4, 7, 6, 9, 0, 2, 7, 0, 5, 5, 6, 8, 3, 1, 9, 3, 0, 1, 4, 6, 6, 9, 2, 2, 0, 6, 7, 4, 4, 6, 0, 7, 3, 5, 2, 9, 1, 0, 9}; int k = 35; LLNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout &lt;&lt; "\n"; LLNode* newhead = rotateLinkedList(head, k); LLNode::printList(newhead);</pre>	3, 0, 0, 8, 0, 0, 4, 9, 7, 1, 7, 2, 7, 5, 4, 4, 7, 5, 9, 2, 4, 5, 7, 9, 7, 9, 7, 2, 0, 6, 7, 6, 5, 1, 9, 7, 1, 2, 7, 8, 7, 5, 4, 7, 6, 9, 0, 2, 7, 0, 5, 5, 6, 8, 3, 1, 9, 3, 0, 1, 4, 6, 6, 9, 2, 2, 0, 6, 7, 4, 4, 6, 0, 7, 3, 5, 2, 9, 1, 0, 9] [0, 2, 7, 0, 5, 5, 6, 8, 3, 1, 9, 3, 0, 1, 4, 6, 6, 9, 2, 2, 0, 6, 7, 4, 4, 6, 1, 4, 6, 6, 9, 2, 2, 0, 6, 7, 4, 4, 6, 1, 4, 6, 6, 9, 2, 2, 0, 6, 7, 4, 4, 6, 1, 4, 6, 6, 9, 2, 2, 0, 6, 7, 4, 1, 1, 2, 3, 1, 3, 1, 4, 6, 6, 9, 2, 2, 2, 0, 6, 7, 4, 1, 1, 2, 3, 1, 3, 1, 4, 6, 6, 9, 2, 2, 2, 0, 6, 7, 4, 1, 1, 2, 3, 1, 3, 1, 4, 6, 6, 9, 2, 2, 2, 0, 6, 7, 4, 1, 1, 2, 3, 1, 3, 1, 4, 6, 6, 9, 2, 2, 2, 0, 6, 7, 4, 1, 1, 2, 3, 1, 3, 1, 4, 6, 6, 9, 2, 2, 2, 0, 6, 7, 4, 1, 1, 2, 3, 1, 2, 3, 1, 3, 1, 4, 6, 6, 9, 2, 2, 2, 0, 6, 7, 4, 1, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1, 3, 1,	[6, 1, 3, 2, 6, 0, 0, 0, 3, 3, 9, 8, 5, 6, 0, 7, 7, 8, 5, 7, 7, 9, 6, 3, 3, 0, 0, 8, 0, 0, 4, 9, 7, 1, 7, 2, 7, 5, 4, 4, 7, 5, 9, 2, 4, 5, 7, 9, 7, 1, 2, 7, 8, 7, 5, 4, 7, 6, 9, 0, 2, 7, 0, 5, 5, 6, 8, 3, 1, 9, 3, 0, 1, 4, 6, 6, 9, 2, 2, 0, 6, 7, 4, 4, 6, 0, 7, 3, 5, 2, 9, 1, 0, 9] [0, 2, 7, 0, 5, 5, 6, 8, 3, 1, 9, 3, 0, 1, 4, 6, 6, 9, 2, 2, 0, 6, 7, 4, 4, 6, 0, 7, 3, 5, 2, 9, 1, 0, 9] [0, 2, 7, 0, 5, 5, 6, 8, 3, 1, 9, 3, 0, 1, 4, 6, 6, 9, 2, 2, 0, 6, 7, 4, 4, 6, 0, 7, 3, 5, 2, 9, 1, 0, 9, 6, 1, 3, 2, 6, 0, 0, 0, 3, 3, 9, 8, 5, 6, 0, 7, 7, 8, 5, 7, 7, 9, 6, 3, 3, 0, 0, 8, 0, 0, 4, 9, 7, 1, 7, 2, 7, 5, 4, 4, 7, 5, 9, 2, 4, 5, 7, 9, 7, 9, 7, 2, 0, 6, 7, 6, 5, 1, 9, 7, 1, 2, 7, 8, 7, 5, 4, 7, 6, 9]	
int arr[] = {9, 1, 7, 5, 8, 6, 2, 2, 2, 6, 0, 8, 1, 9, 6, 8, 4, 8, 4, 3, 7, 0, 7, 8, 9, 5, 3, 4, 7, 4, 3, 5, 2, 2, 7, 8, 9, 7, 1, 9, 9, 8, 3, 5, 7, 1, 6, 9, 1, 2, 0, 6, 8, 0, 4, 1, 6, 5, 8, 7, 6, 8, 0, 5, 7, 8, 8, 6, 7, 5, 8, 0, 7, 6, 4, 9, 5, 9, 6, 4, 1, 5, 6, 2, 2, 6, 7, 0, 3, 4, 2, 3, 9, 0, 9, 6, 3, 6, 7, 5, 5, 5, 9, 0, 6, 1, 1, 5, 0, 9, 1, 1, 1, 0, 4, 6, 3, 3, 3, 5, 8, 7, 4, 7, 1, 7, 1, 8, 4, 2, 0, 1, 9, 0, 7, 9, 2, 8, 9, 2, 5, 3, 2, 3, 9, 4, 1, 6, 1, 8, 3, 1, 4, 5, 2, 5, 7, 7, 0, 9, 6, 6, 4, 8, 1, 1, 6, 0, 2, 6, 0, 7, 5, 5, 0, 5, 2, 6, 9, 9, 9, 9, 2, 3, 0, 6, 8, 8, 4, 5, 6, 2, 8, 5, 9, 8, 3, 6, 8, 8, 6, 2, 1, 2, 1, 4, 6, 2, 0, 9, 3, 9, 6, 4, 2, 3, 6, 2, 0, 9, 8, 7, 0, 6, 0, 7, 0, 5, 9, 4, 3, 7, 9, 7, 3, 5, 7, 0, 3, 1, 8, 9, 9, 4, 6, 2, 0, 9, 3, 9, 6, 4, 2, 3, 6, 2, 0, 9, 8, 7, 0, 6, 0, 7, 0, 5, 9, 4, 3, 7, 9, 7, 3, 5, 7, 0, 3, 1, 8, 9, 9, 4, 0, 8, 6, 4, 6, 7, 3, 8, 1, 2, 1, 5, 4, 9, 5, 9, 5, 8, 6, 6, 8, 9, 4, 4, 0, 6, 4, 5, 3, 0, 3, 9, 7, 1, 7, 2, 5, 0, 1, 9, 1, 2, 5, 6, 8, 7, 1, 6, 9, 6, 2, 8, 1, 2, 0, 4, 3, 4, 6, 7, 1, 0, 7, 0, 7, 9, 4, 0, 1, 2, 3, 5, 6, 3, 5, 6, 7, 5, 4, 2, 4, 8, 2, 5, 8, 8, 6, 6, 2, 6, 6, 8, 1, 2, 2, 8, 0, 8, 9, 0, 7, 9, 0, 1, 6, 6, 3, 6, 5, 1, 5, 9, 0, 3, 7, 3, 7, 2, 0, 0, 2, 7, 5, 2, 9, 5, 5, 8, 1, 7, 7, 9, 7, 1, 1, 6, 4, 3, 8, 0, 7, 9, 1, 0, 9, 5, 2, 7, 2, 1, 5, 3, 9, 7, 6, 9, 1, 3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0, 1, 3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0, 1, 3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0, 1, 3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0, 1, 3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0, 1, 3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0, 1, 3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0, 1, 3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0, 1, 3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0, 1, 3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0, 1, 3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0, 1, 3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0, 1, 3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0, 1, 3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0, 1, 3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0, 1, 3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0, 1, 3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0, 1, 3, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6,	[9, 1, 7, 5, 8, 6, 2, 2, 2, 6, 0, 8, 1, 9, 6, 8, 4, 8, 4, 3, 7, 0, 7, 8, 9, 5, 3, 4, 7, 4, 3, 5, 2, 2, 7, 8, 9, 7, 1, 9, 9, 8, 3, 5, 7, 1, 6, 9, 1, 2, 0, 6, 8, 0, 4, 1, 6, 5, 8, 7, 6, 8, 0, 5, 7, 8, 8, 6, 7, 5, 8, 0, 7, 6, 4, 9, 5, 9, 6, 4, 1, 5, 6, 2, 2, 6, 7, 0, 3, 4, 2, 3, 9, 0, 9, 6, 3, 6, 7, 5, 5, 5, 9, 0, 6, 1, 1, 5, 0, 9, 1, 1, 1, 0, 4, 6, 3, 3, 3, 5, 8, 7, 4, 7, 1, 7, 1, 8, 4, 2, 0, 1, 9, 0, 7, 9, 2, 8, 9, 2, 5, 3, 5, 9, 3, 2, 7, 3, 5, 9, 5, 5, 3, 2, 3, 9, 4, 1, 6, 1, 8, 3, 1, 4, 5, 2, 5, 7, 7, 0, 9, 6, 6, 4, 8, 1, 1, 6, 0, 2, 6, 0, 7, 5, 5, 0, 5, 2, 6, 9, 9, 9, 9, 2, 3, 0, 6, 8, 8, 4, 5, 6, 2, 8, 5, 9, 8, 3, 6, 8, 8, 6, 2, 1, 2, 1, 4, 6, 2, 0, 9, 3, 9, 6, 4, 2, 3, 6, 2, 0, 9, 8, 7, 0, 6, 0, 7, 0, 5, 9, 4, 3, 7, 9, 7, 3, 5, 7, 0, 3, 1, 8, 9, 9, 4, 0, 8, 6, 4, 6, 7, 3, 8, 1, 2, 1, 5, 4, 9, 5, 9, 5, 8, 6, 6, 8, 9, 4, 4, 0, 6, 4, 5, 3, 0, 3, 9, 7, 1, 7, 2, 5, 0, 1, 9, 1, 2, 5, 6, 8, 7, 1, 6, 9, 6, 2, 8, 1, 2, 0, 4, 3, 4, 6, 7, 1, 0, 7, 0, 7, 9, 4, 0, 1, 2, 3, 5, 6, 3, 5, 6, 7, 5, 4, 2, 4, 8, 2, 5, 8, 8, 6, 6, 2, 6, 6, 8, 1, 2, 2, 8, 0, 8, 9, 0, 7, 9, 0, 1, 6, 6, 3, 6, 5, 1, 5, 9, 0, 3, 7, 3, 7, 2, 0, 0, 2, 7, 5, 5, 2, 9, 5, 5, 8, 1,	[9, 1, 7, 5, 8, 6, 2, 2, 2, 2, 6, 0, 8, 1, 9, 6, 8, 4, 8, 4, 3, 7, 0, 7, 8, 9, 5, 3, 4, 7, 4, 3, 5, 2, 2, 7, 8, 9, 7, 1, 9, 9, 8, 3, 5, 7, 1, 6, 9, 1, 2, 0, 6, 8, 0, 4, 1, 6, 5, 8, 7, 6, 8, 0, 5, 7, 8, 8, 6, 7, 5, 8, 0, 7, 6, 4, 9, 5, 9, 6, 4, 1, 5, 6, 2, 2, 6, 7, 0, 3, 4, 2, 3, 9, 0, 9, 6, 3, 6, 7, 5, 5, 5, 9, 0, 6, 1, 1, 5, 0, 9, 1, 1, 1, 0, 4, 6, 3, 3, 3, 5, 8, 7, 4, 7, 1, 7, 1, 8, 4, 2, 0, 1, 9, 0, 7, 9, 2, 8, 9, 2, 5, 3, 5, 9, 3, 2, 7, 3, 5, 9, 5, 5, 3, 2, 3, 9, 4, 1, 6, 1, 8, 3, 1, 4, 5, 2, 5, 7, 7, 0, 9, 6, 6, 4, 8, 1, 1, 6, 0, 2, 6, 0, 7, 5, 5, 0, 5, 2, 6, 9, 9, 9, 9, 2, 3, 0, 6, 8, 8, 4, 5, 6, 2, 8, 5, 9, 8, 3, 6, 8, 8, 6, 2, 1, 2, 1, 4, 6, 2, 0, 9, 3, 9, 6, 4, 2, 3, 6, 2, 0, 9, 8, 7, 0, 6, 0, 7, 0, 5, 9, 4, 3, 7, 9, 7, 3, 5, 7, 0, 3, 1, 8, 9, 9, 4, 0, 8, 6, 4, 6, 7, 3, 8, 1, 2, 1, 5, 4, 9, 5, 9, 5, 8, 6, 6, 8, 9, 4, 4, 0, 6, 4, 5, 3, 0, 3, 9, 7, 1, 7, 2, 5, 0, 1, 9, 1, 2, 5, 6, 8, 7, 1, 6, 9, 6, 2, 8, 1, 2, 0, 4, 3, 4, 6, 7, 1, 0, 7, 0, 7, 9, 4, 0, 1, 2, 3, 5, 6, 3, 5, 6, 7, 5, 4, 2, 4, 8, 2, 5, 8, 8, 6, 6, 2, 6, 6, 8, 1, 2, 2, 8, 0, 8, 9, 0, 7, 9, 0, 1, 6, 6, 3, 6, 5, 1, 5, 9, 0, 3, 7, 3, 7, 2, 0, 0, 2, 7, 5, 2, 9, 5, 5, 8, 1, 7, 9, 7, 1, 1, 6, 4, 3, 8, 0, 7,	

Test	Expected	Got
9, 4, 5, 6, 1, 2, 0, 7, 0, 2, 1, 6, 8,	1, 7, 2, 0, 4, 5, 8, 1, 6, 1, 0, 7,	1, 7, 2, 0, 4, 5, 8, 1, 6, 1, 0, 7,
8, 7, 8, 7, 0, 1, 8, 5, 6, 5, 9, 2, 2,	2, 2, 6, 7, 4, 4, 9, 5, 4, 5, 2, 0,	2, 2, 6, 7, 4, 4, 9, 5, 4, 5, 2, 0,
9, 3, 6, 0, 1, 7, 9, 8, 1, 1, 5, 4, 5,	8, 0, 5, 5, 1, 8, 9, 4, 5, 6, 1, 2,	8, 0, 5, 5, 1, 8, 9, 4, 5, 6, 1, 2,
7, 5, 0, 2, 0, 4, 4, 8, 0, 7, 3};	0, 7, 0, 2, 1, 6, 8, 8, 7, 8, 7, 0,	0, 7, 0, 2, 1, 6, 8, 8, 7, 8, 7, 0,
int k = 196; LLNode* head =	1, 8, 5, 6, 5, 9, 2, 2, 9, 3, 6, 0,	1, 8, 5, 6, 5, 9, 2, 2, 9, 3, 6, 0,
	1, 7, 9, 8, 1, 1, 5, 4, 5, 7, 5, 0, 2, 0, 4, 4, 8, 0, 7, 3]	1, 7, 9, 8, 1, 1, 5, 4, 5, 7, 5, 0, 2, 0, 4, 4, 8, 0, 7, 3]
sizeof(arr) / sizeof(int));	[6, 2, 8, 1, 2, 0, 4, 3, 4, 6, 7, 1,	[6, 2, 8, 1, 2, 0, 4, 3, 4, 6, 7, 1,
LLNode::printList(head);	0, 7, 0, 7, 9, 4, 0, 1, 2, 3, 5, 6,	0, 7, 0, 7, 9, 4, 0, 1, 2, 3, 5, 6,
cout << "\n";	3, 5, 6, 7, 5, 4, 2, 4, 8, 2, 5, 8,	3, 5, 6, 7, 5, 4, 2, 4, 8, 2, 5, 8,
LLNode* newhead =	8, 6, 6, 2, 6, 6, 8, 1, 2, 2, 8, 0,	8, 6, 6, 2, 6, 6, 8, 1, 2, 2, 8, 0,
<pre>rotateLinkedList(head, k);</pre>	8, 9, 0, 7, 9, 0, 1, 6, 6, 3, 6, 5,	8, 9, 0, 7, 9, 0, 1, 6, 6, 3, 6, 5,
LLNode::printList(newhead);	1, 5, 9, 0, 3, 7, 3, 7, 2, 0, 0, 2,	1, 5, 9, 0, 3, 7, 3, 7, 2, 0, 0, 2,
	7, 5, 2, 9, 5, 5, 8, 1, 7, 7, 9, 7,	7, 5, 2, 9, 5, 5, 8, 1, 7, 7, 9, 7,
	1, 1, 6, 4, 3, 8, 0, 7, 9, 1, 0, 9,	1, 1, 6, 4, 3, 8, 0, 7, 9, 1, 0, 9,
	5, 2, 7, 2, 1, 5, 3, 9, 7, 6, 9, 1,	5, 2, 7, 2, 1, 5, 3, 9, 7, 6, 9, 1,
	3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0,	3, 5, 5, 0, 6, 9, 4, 7, 1, 7, 2, 0,
	4, 5, 8, 1, 6, 1, 0, 7, 2, 2, 6, 7,	4, 5, 8, 1, 6, 1, 0, 7, 2, 2, 6, 7,
	4, 4, 9, 5, 4, 5, 2, 0, 8, 0, 5, 5,	4, 4, 9, 5, 4, 5, 2, 0, 8, 0, 5, 5,
	1, 8, 9, 4, 5, 6, 1, 2, 0, 7, 0, 2,	1, 8, 9, 4, 5, 6, 1, 2, 0, 7, 0, 2,
	1, 6, 8, 8, 7, 8, 7, 0, 1, 8, 5, 6,	1, 6, 8, 8, 7, 8, 7, 0, 1, 8, 5, 6,
	5, 9, 2, 2, 9, 3, 6, 0, 1, 7, 9, 8,	5, 9, 2, 2, 9, 3, 6, 0, 1, 7, 9, 8,
	1, 1, 5, 4, 5, 7, 5, 0, 2, 0, 4, 4,	1, 1, 5, 4, 5, 7, 5, 0, 2, 0, 4, 4,
	8, 0, 7, 3, 9, 1, 7, 5, 8, 6, 2, 2,	8, 0, 7, 3, 9, 1, 7, 5, 8, 6, 2, 2,
	2, 6, 0, 8, 1, 9, 6, 8, 4, 8, 4, 3, 7, 0, 7, 8, 9, 5, 3, 4, 7, 4, 3, 5,	2, 6, 0, 8, 1, 9, 6, 8, 4, 8, 4, 3, 7, 0, 7, 8, 9, 5, 3, 4, 7, 4, 3, 5,
	2, 2, 7, 8, 9, 7, 1, 9, 9, 8, 3, 5,	2, 2, 7, 8, 9, 7, 1, 9, 9, 8, 3, 5,
	7, 1, 6, 9, 1, 2, 0, 6, 8, 0, 4, 1,	7, 1, 6, 9, 1, 2, 0, 6, 8, 0, 4, 1,
	6, 5, 8, 7, 6, 8, 0, 5, 7, 8, 8, 6,	6, 5, 8, 7, 6, 8, 0, 5, 7, 8, 8, 6,
	7, 5, 8, 0, 7, 6, 4, 9, 5, 9, 6, 4,	7, 5, 8, 0, 7, 6, 4, 9, 5, 9, 6, 4,
	1, 5, 6, 2, 2, 6, 7, 0, 3, 4, 2, 3,	1, 5, 6, 2, 2, 6, 7, 0, 3, 4, 2, 3,
	9, 0, 9, 6, 3, 6, 7, 5, 5, 5, 9, 0,	9, 0, 9, 6, 3, 6, 7, 5, 5, 5, 9, 0,
	6, 1, 1, 5, 0, 9, 1, 1, 1, 0, 4, 6,	6, 1, 1, 5, 0, 9, 1, 1, 1, 0, 4, 6,
	3, 3, 3, 5, 8, 7, 4, 7, 1, 7, 1, 8,	3, 3, 3, 5, 8, 7, 4, 7, 1, 7, 1, 8,
	4, 2, 0, 1, 9, 0, 7, 9, 2, 8, 9, 2,	4, 2, 0, 1, 9, 0, 7, 9, 2, 8, 9, 2,
	5, 3, 5, 9, 3, 2, 7, 3, 5, 9, 5, 5,	5, 3, 5, 9, 3, 2, 7, 3, 5, 9, 5, 5,
	3, 2, 3, 9, 4, 1, 6, 1, 8, 3, 1, 4,	3, 2, 3, 9, 4, 1, 6, 1, 8, 3, 1, 4,
	5, 2, 5, 7, 7, 0, 9, 6, 6, 4, 8, 1,	5, 2, 5, 7, 7, 0, 9, 6, 6, 4, 8, 1,
	1, 6, 0, 2, 6, 0, 7, 5, 5, 0, 5, 2,	1, 6, 0, 2, 6, 0, 7, 5, 5, 0, 5, 2,
	6, 9, 9, 9, 9, 2, 3, 0, 6, 8, 8, 4, 5, 6, 2, 8, 5, 9, 8, 3, 6, 8, 8, 6,	6, 9, 9, 9, 9, 2, 3, 0, 6, 8, 8, 4, 5, 6, 2, 8, 5, 9, 8, 3, 6, 8, 8, 6,
	2, 1, 2, 1, 4, 6, 2, 0, 9, 3, 9, 6,	2, 1, 2, 1, 4, 6, 2, 0, 9, 3, 9, 6,
	4, 2, 3, 6, 2, 0, 9, 8, 7, 0, 6, 0,	4, 2, 3, 6, 2, 0, 9, 8, 7, 0, 6, 0,
	7, 0, 5, 9, 4, 3, 7, 9, 7, 3, 5, 7,	7, 0, 5, 9, 4, 3, 7, 9, 7, 3, 5, 7,
	0, 3, 1, 8, 9, 9, 4, 0, 8, 6, 4, 6,	0, 3, 1, 8, 9, 9, 4, 0, 8, 6, 4, 6,
	7, 3, 8, 1, 2, 1, 5, 4, 9, 5, 9, 5,	7, 3, 8, 1, 2, 1, 5, 4, 9, 5, 9, 5,
	8, 6, 6, 8, 9, 4, 4, 0, 6, 4, 5, 3,	8, 6, 6, 8, 9, 4, 4, 0, 6, 4, 5, 3,
	0, 3, 9, 7, 1, 7, 2, 5, 0, 1, 9, 1,	0, 3, 9, 7, 1, 7, 2, 5, 0, 1, 9, 1,
	2, 5, 6, 8, 7, 1, 6, 9]	2, 5, 6, 8, 7, 1, 6, 9]
int arr[] = {8, 0, 8, 8, 9, 3, 3, 5,	[8, 0, 8, 8, 9, 3, 3, 5, 4, 9, 7, 9,	[8, 0, 8, 8, 9, 3, 3, 5, 4, 9, 7, 9,
4, 9, 7, 9, 5, 3, 8, 6, 1, 0, 6, 4, 5,	5, 3, 8, 6, 1, 0, 6, 4, 5, 1, 1, 5,	5, 3, 8, 6, 1, 0, 6, 4, 5, 1, 1, 5,
1, 1, 5, 3, 8, 6, 1, 1, 1, 0, 1, 4, 9,	3, 8, 6, 1, 1, 1, 0, 1, 4, 9, 0, 1,	3, 8, 6, 1, 1, 1, 0, 1, 4, 9, 0, 1,
0, 1, 8, 0, 2, 7, 1, 5, 7, 6, 7, 7, 9,	8, 0, 2, 7, 1, 5, 7, 6, 7, 7, 9, 5,	8, 0, 2, 7, 1, 5, 7, 6, 7, 7, 9, 5,
5, 0, 9, 6, 3, 7, 6, 6, 4, 6, 2, 9, 1,	0, 9, 6, 3, 7, 6, 6, 4, 6, 2, 9, 1,	0, 9, 6, 3, 7, 6, 6, 4, 6, 2, 9, 1,
5, 0, 8, 6, 0, 8, 6, 3, 0, 3, 6, 8, 5,	5, 0, 8, 6, 0, 8, 6, 3, 0, 3, 6, 8,	5, 0, 8, 6, 0, 8, 6, 3, 0, 3, 6, 8,
0, 1, 9, 9, 6, 3, 3, 2, 9, 2, 0, 0, 5,	5, 0, 1, 9, 9, 6, 3, 3, 2, 9, 2, 0,	5, 0, 1, 9, 9, 6, 3, 3, 2, 9, 2, 0,
0, 4, 6, 7, 2, 6, 5, 2, 8, 8, 7, 1, 0,	0, 5, 0, 4, 6, 7, 2, 6, 5, 2, 8, 8,	0, 5, 0, 4, 6, 7, 2, 6, 5, 2, 8, 8,
9, 7, 7, 1, 5, 8, 7, 5, 7, 8, 7, 8, 7,	7, 1, 0, 9, 7, 7, 1, 5, 8, 7, 5, 7,	7, 1, 0, 9, 7, 7, 1, 5, 8, 7, 5, 7,
1, 7, 9, 7, 1, 3, 0, 5, 5, 1, 0, 2, 1,	8, 7, 8, 7, 1, 7, 9, 7, 1, 3, 0, 5,	8, 7, 8, 7, 1, 7, 9, 7, 1, 3, 0, 5,
	5 1 0 2 1 0 1 5 3 7 7 0	5, 1, 0, 2, 1, 0, 1, 5, 3, 7, 7, 9,
0, 1, 5, 3, 7, 7, 9, 6, 1, 6, 4, 8, 9,	5, 1, 0, 2, 1, 0, 1, 5, 3, 7, 7, 9,	
8, 6, 0, 0, 3, 6, 2, 3, 4, 9, 7, 4, 2,	6, 1, 6, 4, 8, 9, 8, 6, 0, 0, 3, 6,	6, 1, 6, 4, 8, 9, 8, 6, 0, 0, 3, 6,
8, 6, 0, 0, 3, 6, 2, 3, 4, 9, 7, 4, 2, 2, 9, 7, 7, 4, 9, 9, 7, 5, 6, 2, 4, 0,	6, 1, 6, 4, 8, 9, 8, 6, 0, 0, 3, 6, 2, 3, 4, 9, 7, 4, 2, 2, 9, 7, 7, 4,	2, 3, 4, 9, 7, 4, 2, 2, 9, 7, 7, 4,
8, 6, 0, 0, 3, 6, 2, 3, 4, 9, 7, 4, 2, 2, 9, 7, 7, 4, 9, 9, 7, 5, 6, 2, 4, 0, 1, 9, 9, 8, 4, 6, 1, 2, 9, 6, 7, 9, 4,	6, 1, 6, 4, 8, 9, 8, 6, 0, 0, 3, 6,	

Test	Expected	Got
5, 3, 2, 4, 9, 9, 2, 3, 4, 4, 1, 8, 2,	0, 6, 1, 7, 8, 6, 9, 5, 4, 7, 0, 5,	0, 6, 1, 7, 8, 6, 9, 5, 4, 7, 0, 5
4, 4, 6, 2, 0, 5, 9, 4, 5, 8, 1, 8, 4,	3, 2, 4, 9, 9, 2, 3, 4, 4, 1, 8, 2,	3, 2, 4, 9, 9, 2, 3, 4, 4, 1, 8, 2
7, 5, 4, 9, 7, 3, 1, 7, 7, 5, 4, 5, 6,	4, 4, 6, 2, 0, 5, 9, 4, 5, 8, 1, 8,	4, 4, 6, 2, 0, 5, 9, 4, 5, 8, 1, 8
2, 1, 7, 5, 9, 7, 4, 8, 4, 6, 9, 3, 4,	4, 7, 5, 4, 9, 7, 3, 1, 7, 7, 5, 4,	4, 7, 5, 4, 9, 7, 3, 1, 7, 7, 5, 4
4, 3, 7, 1, 3, 9, 3, 3, 7, 9, 7, 9, 4,	5, 6, 2, 1, 7, 5, 9, 7, 4, 8, 4, 6,	5, 6, 2, 1, 7, 5, 9, 7, 4, 8, 4, 6
6, 0, 5, 5, 5, 6, 2, 5, 5, 9, 0, 2, 9,	9, 3, 4, 4, 3, 7, 1, 3, 9, 3, 3, 7,	9, 3, 4, 4, 3, 7, 1, 3, 9, 3, 3, 7,
0, 3, 8, 7, 6, 1, 0, 4, 0, 7, 4, 2, 5,	9, 7, 9, 4, 6, 0, 5, 5, 5, 6, 2, 5,	9, 7, 9, 4, 6, 0, 5, 5, 5, 6, 2, 5
0, 0, 6, 4, 3, 6, 0, 9, 2, 4, 1, 0, 3,	5, 9, 0, 2, 9, 0, 3, 8, 7, 6, 1, 0,	5, 9, 0, 2, 9, 0, 3, 8, 7, 6, 1, 0
8, 0, 1, 7, 3, 8, 9, 0, 5, 3, 2, 8, 4,	4, 0, 7, 4, 2, 5, 0, 0, 6, 4, 3, 6,	4, 0, 7, 4, 2, 5, 0, 0, 6, 4, 3, 6
0, 4, 6, 9, 8, 6, 5, 2, 7, 9, 0, 1, 7,	0, 9, 2, 4, 1, 0, 3, 8, 0, 1, 7, 3,	0, 9, 2, 4, 1, 0, 3, 8, 0, 1, 7, 3
5, 5, 9, 5, 6, 8, 2, 8, 6, 7, 4, 5, 9,	8, 9, 0, 5, 3, 2, 8, 4, 0, 4, 6, 9,	8, 9, 0, 5, 3, 2, 8, 4, 0, 4, 6, 9
0, 2, 6, 8, 4, 3, 5, 9, 9, 1, 0, 3, 2,	8, 6, 5, 2, 7, 9, 0, 1, 7, 5, 5, 9,	8, 6, 5, 2, 7, 9, 0, 1, 7, 5, 5, 9
3, 8, 1, 0, 5, 9, 6, 8, 9, 0, 9, 9, 4,	5, 6, 8, 2, 8, 6, 7, 4, 5, 9, 0, 2,	5, 6, 8, 2, 8, 6, 7, 4, 5, 9, 0, 2
7, 5, 1, 7, 0, 3, 8, 9, 9, 1, 0, 3, 0,	6, 8, 4, 3, 5, 9, 9, 1, 0, 3, 2, 3,	6, 8, 4, 3, 5, 9, 9, 1, 0, 3, 2, 3
4, 2, 6, 6, 9, 1, 2, 5, 2, 3, 5, 1, 5,	8, 1, 0, 5, 9, 6, 8, 9, 0, 9, 9, 4,	8, 1, 0, 5, 9, 6, 8, 9, 0, 9, 9, 4,
0, 1, 6, 4, 8, 8, 4, 9, 5, 6, 5, 4, 2,	7, 5, 1, 7, 0, 3, 8, 9, 9, 1, 0, 3,	7, 5, 1, 7, 0, 3, 8, 9, 9, 1, 0, 3
5, 9, 7, 3, 0, 6, 6, 8, 8, 7, 1, 0, 5,	0, 4, 2, 6, 6, 9, 1, 2, 5, 2, 3, 5,	0, 4, 2, 6, 6, 9, 1, 2, 5, 2, 3, 5,
3, 5, 5, 9, 4, 8, 4, 6, 9, 3, 8, 3, 4,	1, 5, 0, 1, 6, 4, 8, 8, 4, 9, 5, 6,	1, 5, 0, 1, 6, 4, 8, 8, 4, 9, 5, 6
9, 6, 8, 9, 7, 3, 4, 1, 0, 1, 2, 0, 0,	5, 4, 2, 5, 9, 7, 3, 0, 6, 6, 8, 8,	5, 4, 2, 5, 9, 7, 3, 0, 6, 6, 8, 8
8, 1, 8, 5, 1, 5, 1, 0, 1, 1, 4, 0, 8,	7, 1, 0, 5, 3, 5, 5, 9, 4, 8, 4, 6,	7, 1, 0, 5, 3, 5, 5, 9, 4, 8, 4, 6
7, 2, 8, 0, 0, 9, 6, 2, 1, 5, 1, 3, 4,	9, 3, 8, 3, 4, 9, 6, 8, 9, 7, 3, 4,	9, 3, 8, 3, 4, 9, 6, 8, 9, 7, 3, 4
2, 5, 2, 0, 2, 5, 8, 1, 1, 6, 4, 6, 5,	1, 0, 1, 2, 0, 0, 8, 1, 8, 5, 1, 5,	1, 0, 1, 2, 0, 0, 8, 1, 8, 5, 1, 5
8, 5, 9, 5, 8, 1, 8, 5, 4, 2, 0, 5, 5,	1, 0, 1, 1, 4, 0, 8, 7, 2, 8, 0, 0,	1, 0, 1, 1, 4, 0, 8, 7, 2, 8, 0, 0
0, 1, 9, 7, 1, 1, 7, 6, 1, 8, 8, 4, 6,	9, 6, 2, 1, 5, 1, 3, 4, 2, 5, 2, 0,	9, 6, 2, 1, 5, 1, 3, 4, 2, 5, 2, 0
4, 4, 3, 1, 0, 3, 3, 7, 9, 7, 9, 5, 1,	2, 5, 8, 1, 1, 6, 4, 6, 5, 8, 5, 9,	2, 5, 8, 1, 1, 6, 4, 6, 5, 8, 5, 9
5, 1, 5, 2, 0, 3, 1, 4, 9, 2, 6, 5, 3,	5, 8, 1, 8, 5, 4, 2, 0, 5, 5, 0, 1,	5, 8, 1, 8, 5, 4, 2, 0, 5, 5, 0, 1
2, 7, 8, 1, 6, 7, 0, 2, 7, 6, 1, 5, 8,	9, 7, 1, 1, 7, 6, 1, 8, 8, 4, 6, 4,	9, 7, 1, 1, 7, 6, 1, 8, 8, 4, 6, 4
3, 5, 0, 4, 7, 9, 8, 8, 2, 6, 9, 9, 7,	4, 3, 1, 0, 3, 3, 7, 9, 7, 9, 5, 1,	4, 3, 1, 0, 3, 3, 7, 9, 7, 9, 5, 1
8, 3, 8, 8, 0, 8, 6, 4, 5, 7, 2, 0, 7,	5, 1, 5, 2, 0, 3, 1, 4, 9, 2, 6, 5,	5, 1, 5, 2, 0, 3, 1, 4, 9, 2, 6, 5
3, 5, 5, 3, 5, 6, 2, 3, 3, 1, 2, 4, 4,	3, 2, 7, 8, 1, 6, 7, 0, 2, 7, 6, 1,	3, 2, 7, 8, 1, 6, 7, 0, 2, 7, 6, 1
4, 5, 5, 4, 9, 7, 0, 8, 0, 4, 3, 0, 9,	5, 8, 3, 5, 0, 4, 7, 9, 8, 8, 2, 6,	5, 8, 3, 5, 0, 4, 7, 9, 8, 8, 2, 6
7, 7, 8, 1, 3, 7, 1, 5, 4, 7, 6, 3, 8,	9, 9, 7, 8, 3, 8, 8, 0, 8, 6, 4, 5,	9, 9, 7, 8, 3, 8, 8, 0, 8, 6, 4, 5
6, 7, 5, 4, 2, 0, 6, 7, 4, 7, 4, 6, 1,	7, 2, 0, 7, 3, 5, 5, 3, 5, 6, 2, 3,	7, 2, 0, 7, 3, 5, 5, 3, 5, 6, 2, 3
3, 7, 2, 4, 4, 0, 1, 2, 9, 1, 9, 5, 7,	3, 1, 2, 4, 4, 4, 5, 5, 4, 9, 7, 0,	3, 1, 2, 4, 4, 4, 5, 5, 4, 9, 7, 0
1, 7, 7, 3, 2, 9, 8, 2, 4, 4, 9, 0, 5,	8, 0, 4, 3, 0, 9, 7, 7, 8, 1, 3, 7,	8, 0, 4, 3, 0, 9, 7, 7, 8, 1, 3, 7
6, 7, 9, 1, 8, 3, 8, 2, 3, 2, 4, 6, 2,	1, 5, 4, 7, 6, 3, 8, 6, 7, 5, 4, 2,	1, 5, 4, 7, 6, 3, 8, 6, 7, 5, 4, 2
0, 7, 5, 9, 5, 2, 2, 6, 8, 6, 9, 9, 3,	0, 6, 7, 4, 7, 4, 6, 1, 3, 7, 2, 4,	0, 6, 7, 4, 7, 4, 6, 1, 3, 7, 2, 4
0, 4, 1, 5, 2, 3, 9, 3, 9, 1, 7, 3, 1,	4, 0, 1, 2, 9, 1, 9, 5, 7, 1, 7, 7,	4, 0, 1, 2, 9, 1, 9, 5, 7, 1, 7, 7
2, 8, 2, 0, 4, 1, 1, 8, 4, 8, 2, 0, 0,	3, 2, 9, 8, 2, 4, 4, 9, 0, 5, 6, 7,	3, 2, 9, 8, 2, 4, 4, 9, 0, 5, 6, 7
	9, 1, 8, 3, 8, 2, 3, 2, 4, 6, 2, 0,	9, 1, 8, 3, 8, 2, 3, 2, 4, 6, 2, 0
2, 3, 5, 2, 9, 6, 8, 3, 6, 9, 4, 1, 0,	7, 5, 9, 5, 2, 2, 6, 8, 6, 9, 9, 3,	7, 5, 9, 5, 2, 2, 6, 8, 6, 9, 9, 3
8, 7, 2, 5, 7, 4, 4, 0, 2, 0, 6, 6, 4,	0, 4, 1, 5, 2, 3, 9, 3, 9, 1, 7, 3,	0, 4, 1, 5, 2, 3, 9, 3, 9, 1, 7, 3
9, 1, 8, 1, 1, 8, 8, 3, 5, 2, 5, 5, 5,	1, 2, 8, 2, 0, 4, 1, 1, 8, 4, 8, 2,	1, 2, 8, 2, 0, 4, 1, 1, 8, 4, 8, 2,
1, 8, 3, 7, 8, 8, 1, 1, 5, 5, 1, 9, 7,	0, 0, 6, 6, 5, 1, 3, 5, 0, 6, 1, 6,	0, 0, 6, 6, 5, 1, 3, 5, 0, 6, 1, 6,
2, 2, 7, 2, 4, 4, 1, 0, 0, 0, 8, 7, 9,	1, 7, 9, 2, 3, 5, 2, 9, 6, 8, 3, 6,	1, 7, 9, 2, 3, 5, 2, 9, 6, 8, 3, 6,
4, 0, 0, 3, 5, 5, 1, 9, 5, 9, 3, 7, 5,	9, 4, 1, 0, 8, 7, 2, 5, 7, 4, 4, 0,	9, 4, 1, 0, 8, 7, 2, 5, 7, 4, 4, 0,
9, 0, 9, 8, 2, 7, 2, 0, 5, 2, 5, 1, 6,	2, 0, 6, 6, 4, 9, 1, 8, 1, 1, 8, 8,	2, 0, 6, 6, 4, 9, 1, 8, 1, 1, 8, 8,
	3, 5, 2, 5, 5, 5, 1, 8, 3, 7, 8, 8,	3, 5, 2, 5, 5, 5, 1, 8, 3, 7, 8, 8
2, 5, 5, 3, 0, 5, 4, 4, 5, 3, 2, 0, 2,	1, 1, 5, 5, 1, 9, 7, 2, 2, 7, 2, 4,	1, 1, 5, 5, 1, 9, 7, 2, 2, 7, 2, 4
	4, 1, 0, 0, 0, 8, 7, 9, 4, 0, 0, 3,	4, 1, 0, 0, 0, 8, 7, 9, 4, 0, 0, 3
	5, 5, 1, 9, 5, 9, 3, 7, 5, 9, 0, 9,	5, 5, 1, 9, 5, 9, 3, 7, 5, 9, 0, 9,
4, 2, 5, 2, 3, 9, 6, 2, 3, 0, 8, 3, 2,	8, 2, 7, 2, 0, 5, 2, 5, 1, 6, 0, 8,	8, 2, 7, 2, 0, 5, 2, 5, 1, 6, 0, 8
8, 8, 3, 0, 5, 1, 8, 8, 2, 9, 3, 7, 7,	5, 2, 4, 9, 0, 8, 3, 9, 1, 9, 9, 2,	5, 2, 4, 9, 0, 8, 3, 9, 1, 9, 9, 2,
4, 9, 6, 2, 0, 0, 6, 8, 4, 6, 7, 7, 8,	5, 5, 3, 0, 5, 4, 4, 5, 3, 2, 0, 2,	5, 5, 3, 0, 5, 4, 4, 5, 3, 2, 0, 2,
0, 7, 7, 5, 6, 5, 6, 2, 8, 3, 2, 7, 5,	4, 3, 5, 1, 9, 3, 0, 8, 1, 4, 4, 9,	4, 3, 5, 1, 9, 3, 0, 8, 1, 4, 4, 9
	9, 0, 9, 9, 1, 3, 0, 1, 1, 9, 6, 9,	9, 0, 9, 9, 1, 3, 0, 1, 1, 9, 6, 9,
0, 6, 5, 4, 5, 9, 4, 1, 2, 9, 7, 6, 2,	2, 4, 4, 2, 5, 2, 3, 9, 6, 2, 3, 0,	2, 4, 4, 2, 5, 2, 3, 9, 6, 2, 3, 0,
0, 2, 3, 3, 8, 0, 1, 8, 4, 7, 1, 0, 6,	8, 3, 2, 8, 8, 3, 0, 5, 1, 8, 8, 2,	8, 3, 2, 8, 8, 3, 0, 5, 1, 8, 8, 2,
4, 1, 0, 4, 0, 4, 8, 9, 5, 1, 0, 5, 2,	9, 3, 7, 7, 4, 9, 6, 2, 0, 0, 6, 8,	9, 3, 7, 7, 4, 9, 6, 2, 0, 0, 6, 8,
4, 5, 6, 3, 5, 2, 2, 9, 6, 0, 2, 1, 2,	4, 6, 7, 7, 8, 0, 7, 7, 5, 6, 5, 6,	4, 6, 7, 7, 8, 0, 7, 7, 5, 6, 5, 6,
	2, 8, 3, 2, 7, 5, 7, 4, 0, 0, 2, 2,	2, 8, 3, 2, 7, 5, 7, 4, 0, 0, 2, 2,
4, 5, 7, 8, 4, 0, 7, 2, 8};	6, 7, 8, 5, 9, 3, 3, 0, 6, 5, 4, 5,	6, 7, 8, 5, 9, 3, 3, 0, 6, 5, 4, 5
int k = 389;	9, 4, 1, 2, 9, 7, 6, 2, 0, 2, 3, 3,	9, 4, 1, 2, 9, 7, 6, 2, 0, 2, 3, 3,
LLNode* head = LLNode::createWithIterators(arr, arr +	8, 0, 1, 8, 4, 7, 1, 0, 6, 4, 1, 0, 4, 0, 4, 8, 9, 5, 1, 0, 5, 2, 4, 5,	8, 0, 1, 8, 4, 7, 1, 0, 6, 4, 1, 0, 4, 0, 4, 8, 9, 5, 1, 0, 5, 2, 4, 5,

Test	Expected	Got
<pre>sizeof(arr) / sizeof(int));</pre>	6, 3, 5, 2, 2, 9, 6, 0, 2, 1, 2, 9,	6, 3, 5, 2, 2, 9, 6, 0, 2, 1, 2, 9,
<pre>LLNode::printList(head);</pre>	7, 8, 3, 1, 6, 0, 2, 2, 7, 8, 9, 3,	7, 8, 3, 1, 6, 0, 2, 2, 7, 8, 9, 3,
cout << "\n";	4, 5, 7, 8, 4, 0, 7, 2, 8]	4, 5, 7, 8, 4, 0, 7, 2, 8]
LLNode* newhead =	[6, 3, 8, 6, 7, 5, 4, 2, 0, 6, 7, 4,	[6, 3, 8, 6, 7, 5, 4, 2, 0, 6, 7, 4,
<pre>rotateLinkedList(head, k); LLNode::printList(newhead);</pre>	7, 4, 6, 1, 3, 7, 2, 4, 4, 0, 1, 2,	7, 4, 6, 1, 3, 7, 2, 4, 4, 0, 1, 2,
LENouepr inclise(newneau),	9, 1, 9, 5, 7, 1, 7, 7, 3, 2, 9, 8, 2, 4, 4, 9, 0, 5, 6, 7, 9, 1, 8, 3,	9, 1, 9, 5, 7, 1, 7, 7, 3, 2, 9, 8, 2, 4, 4, 9, 0, 5, 6, 7, 9, 1, 8, 3,
	8, 2, 3, 2, 4, 6, 2, 0, 7, 5, 9, 5,	8, 2, 3, 2, 4, 6, 2, 0, 7, 5, 9, 5,
	2, 2, 6, 8, 6, 9, 9, 3, 0, 4, 1, 5,	2, 2, 6, 8, 6, 9, 9, 3, 0, 4, 1, 5,
	2, 3, 9, 3, 9, 1, 7, 3, 1, 2, 8, 2,	2, 3, 9, 3, 9, 1, 7, 3, 1, 2, 8, 2,
	0, 4, 1, 1, 8, 4, 8, 2, 0, 0, 6, 6,	0, 4, 1, 1, 8, 4, 8, 2, 0, 0, 6, 6,
	5, 1, 3, 5, 0, 6, 1, 6, 1, 7, 9, 2,	5, 1, 3, 5, 0, 6, 1, 6, 1, 7, 9, 2,
	3, 5, 2, 9, 6, 8, 3, 6, 9, 4, 1, 0,	3, 5, 2, 9, 6, 8, 3, 6, 9, 4, 1, 0,
	8, 7, 2, 5, 7, 4, 4, 0, 2, 0, 6, 6,	8, 7, 2, 5, 7, 4, 4, 0, 2, 0, 6, 6,
	4, 9, 1, 8, 1, 1, 8, 8, 3, 5, 2, 5,	4, 9, 1, 8, 1, 1, 8, 8, 3, 5, 2, 5,
	5, 5, 1, 8, 3, 7, 8, 8, 1, 1, 5, 5,	5, 5, 1, 8, 3, 7, 8, 8, 1, 1, 5, 5,
	1, 9, 7, 2, 2, 7, 2, 4, 4, 1, 0, 0,	1, 9, 7, 2, 2, 7, 2, 4, 4, 1, 0, 0,
	0, 8, 7, 9, 4, 0, 0, 3, 5, 5, 1, 9, 5, 9, 3, 7, 5, 9, 0, 9, 8, 2, 7, 2,	0, 8, 7, 9, 4, 0, 0, 3, 5, 5, 1, 9, 5, 9, 3, 7, 5, 9, 0, 9, 8, 2, 7, 2,
	0, 5, 2, 5, 1, 6, 0, 8, 5, 2, 4, 9,	0, 5, 2, 5, 1, 6, 0, 8, 5, 2, 4, 9,
	0, 8, 3, 9, 1, 9, 9, 2, 5, 5, 3, 0,	0, 8, 3, 9, 1, 9, 9, 2, 5, 5, 3, 0,
	5, 4, 4, 5, 3, 2, 0, 2, 4, 3, 5, 1,	5, 4, 4, 5, 3, 2, 0, 2, 4, 3, 5, 1,
	9, 3, 0, 8, 1, 4, 4, 9, 9, 0, 9, 9,	9, 3, 0, 8, 1, 4, 4, 9, 9, 0, 9, 9,
	1, 3, 0, 1, 1, 9, 6, 9, 2, 4, 4, 2,	1, 3, 0, 1, 1, 9, 6, 9, 2, 4, 4, 2,
	5, 2, 3, 9, 6, 2, 3, 0, 8, 3, 2, 8,	5, 2, 3, 9, 6, 2, 3, 0, 8, 3, 2, 8,
	8, 3, 0, 5, 1, 8, 8, 2, 9, 3, 7, 7,	8, 3, 0, 5, 1, 8, 8, 2, 9, 3, 7, 7,
	4, 9, 6, 2, 0, 0, 6, 8, 4, 6, 7, 7,	4, 9, 6, 2, 0, 0, 6, 8, 4, 6, 7, 7,
	8, 0, 7, 7, 5, 6, 5, 6, 2, 8, 3, 2,	8, 0, 7, 7, 5, 6, 5, 6, 2, 8, 3, 2,
	7, 5, 7, 4, 0, 0, 2, 2, 6, 7, 8, 5,	7, 5, 7, 4, 0, 0, 2, 2, 6, 7, 8, 5,
	9, 3, 3, 0, 6, 5, 4, 5, 9, 4, 1, 2,	9, 3, 3, 0, 6, 5, 4, 5, 9, 4, 1, 2,
	9, 7, 6, 2, 0, 2, 3, 3, 8, 0, 1, 8, 4, 7, 1, 0, 6, 4, 1, 0, 4, 0, 4, 8,	9, 7, 6, 2, 0, 2, 3, 3, 8, 0, 1, 8, 4, 7, 1, 0, 6, 4, 1, 0, 4, 0, 4, 8,
	9, 5, 1, 0, 5, 2, 4, 5, 6, 3, 5, 2,	9, 5, 1, 0, 5, 2, 4, 5, 6, 3, 5, 2,
	2, 9, 6, 0, 2, 1, 2, 9, 7, 8, 3, 1,	2, 9, 6, 0, 2, 1, 2, 9, 7, 8, 3, 1,
	6, 0, 2, 2, 7, 8, 9, 3, 4, 5, 7, 8,	6, 0, 2, 2, 7, 8, 9, 3, 4, 5, 7, 8,
	4, 0, 7, 2, 8, 8, 0, 8, 8, 9, 3, 3,	4, 0, 7, 2, 8, 8, 0, 8, 8, 9, 3, 3,
	5, 4, 9, 7, 9, 5, 3, 8, 6, 1, 0, 6,	5, 4, 9, 7, 9, 5, 3, 8, 6, 1, 0, 6,
	4, 5, 1, 1, 5, 3, 8, 6, 1, 1, 1, 0,	4, 5, 1, 1, 5, 3, 8, 6, 1, 1, 1, 0,
	1, 4, 9, 0, 1, 8, 0, 2, 7, 1, 5, 7,	1, 4, 9, 0, 1, 8, 0, 2, 7, 1, 5, 7,
	6, 7, 7, 9, 5, 0, 9, 6, 3, 7, 6, 6,	6, 7, 7, 9, 5, 0, 9, 6, 3, 7, 6, 6,
	4, 6, 2, 9, 1, 5, 0, 8, 6, 0, 8, 6,	4, 6, 2, 9, 1, 5, 0, 8, 6, 0, 8, 6,
	3, 0, 3, 6, 8, 5, 0, 1, 9, 9, 6, 3, 3, 2, 9, 2, 0, 0, 5, 0, 4, 6, 7, 2,	3, 0, 3, 6, 8, 5, 0, 1, 9, 9, 6, 3, 3, 2, 9, 2, 0, 0, 5, 0, 4, 6, 7, 2,
	6, 5, 2, 8, 8, 7, 1, 0, 9, 7, 7, 1,	6, 5, 2, 8, 8, 7, 1, 0, 9, 7, 7, 1,
	5, 8, 7, 5, 7, 8, 7, 8, 7, 1, 7, 9,	5, 8, 7, 5, 7, 8, 7, 8, 7, 1, 7, 9,
	7, 1, 3, 0, 5, 5, 1, 0, 2, 1, 0, 1,	7, 1, 3, 0, 5, 5, 1, 0, 2, 1, 0, 1,
	5, 3, 7, 7, 9, 6, 1, 6, 4, 8, 9, 8,	5, 3, 7, 7, 9, 6, 1, 6, 4, 8, 9, 8,
	6, 0, 0, 3, 6, 2, 3, 4, 9, 7, 4, 2,	6, 0, 0, 3, 6, 2, 3, 4, 9, 7, 4, 2,
	2, 9, 7, 7, 4, 9, 9, 7, 5, 6, 2, 4,	2, 9, 7, 7, 4, 9, 9, 7, 5, 6, 2, 4,
	0, 1, 9, 9, 8, 4, 6, 1, 2, 9, 6, 7,	0, 1, 9, 9, 8, 4, 6, 1, 2, 9, 6, 7,
	9, 4, 7, 5, 2, 9, 4, 2, 5, 9, 4, 1,	9, 4, 7, 5, 2, 9, 4, 2, 5, 9, 4, 1,
	6, 0, 0, 5, 0, 0, 6, 1, 7, 8, 6, 9,	6, 0, 0, 5, 0, 0, 6, 1, 7, 8, 6, 9,
	5, 4, 7, 0, 5, 3, 2, 4, 9, 9, 2, 3,	5, 4, 7, 0, 5, 3, 2, 4, 9, 9, 2, 3,
	4, 4, 1, 8, 2, 4, 4, 6, 2, 0, 5, 9,	4, 4, 1, 8, 2, 4, 4, 6, 2, 0, 5, 9, 4, 5, 8, 1, 8, 4, 7, 5, 4, 9, 7, 3,
	4, 5, 8, 1, 8, 4, 7, 5, 4, 9, 7, 3, 1, 7, 7, 5, 4, 5, 6, 2, 1, 7, 5, 9,	1, 7, 7, 5, 4, 5, 6, 2, 1, 7, 5, 9,
	7, 4, 8, 4, 6, 9, 3, 4, 4, 3, 7, 1,	7, 4, 8, 4, 6, 9, 3, 4, 4, 3, 7, 1,
	3, 9, 3, 3, 7, 9, 7, 9, 4, 6, 0, 5,	3, 9, 3, 3, 7, 9, 7, 9, 4, 6, 0, 5,
	5, 5, 6, 2, 5, 5, 9, 0, 2, 9, 0, 3,	5, 5, 6, 2, 5, 5, 9, 0, 2, 9, 0, 3,
	8, 7, 6, 1, 0, 4, 0, 7, 4, 2, 5, 0,	8, 7, 6, 1, 0, 4, 0, 7, 4, 2, 5, 0,
	0, 6, 4, 3, 6, 0, 9, 2, 4, 1, 0, 3,	0, 6, 4, 3, 6, 0, 9, 2, 4, 1, 0, 3,
	8, 0, 1, 7, 3, 8, 9, 0, 5, 3, 2, 8,	8, 0, 1, 7, 3, 8, 9, 0, 5, 3, 2, 8,
	4, 0, 4, 6, 9, 8, 6, 5, 2, 7, 9, 0,	4, 0, 4, 6, 9, 8, 6, 5, 2, 7, 9, 0,
	1, 7, 5, 5, 9, 5, 6, 8, 2, 8, 6, 7,	1, 7, 5, 5, 9, 5, 6, 8, 2, 8, 6, 7,
	4, 5, 9, 0, 2, 6, 8, 4, 3, 5, 9, 9,	4, 5, 9, 0, 2, 6, 8, 4, 3, 5, 9, 9,

-	Test	Expected	Got
		1, 0, 3, 2, 3, 8, 1, 0, 5, 9, 6, 8,	1, 0, 3, 2, 3, 8, 1, 0, 5, 9, 6, 8,
		9, 0, 9, 9, 4, 7, 5, 1, 7, 0, 3, 8,	9, 0, 9, 9, 4, 7, 5, 1, 7, 0, 3, 8,
		9, 9, 1, 0, 3, 0, 4, 2, 6, 6, 9, 1, 2, 5, 2, 3, 5, 1, 5, 0, 1, 6, 4, 8,	9, 9, 1, 0, 3, 0, 4, 2, 6, 6, 9, 1, 2, 5, 2, 3, 5, 1, 5, 0, 1, 6, 4, 8,
		8, 4, 9, 5, 6, 5, 4, 2, 5, 9, 7, 3,	8, 4, 9, 5, 6, 5, 4, 2, 5, 9, 7, 3,
		0, 6, 6, 8, 8, 7, 1, 0, 5, 3, 5, 5,	0, 6, 6, 8, 8, 7, 1, 0, 5, 3, 5, 5,
		9, 4, 8, 4, 6, 9, 3, 8, 3, 4, 9, 6,	9, 4, 8, 4, 6, 9, 3, 8, 3, 4, 9, 6,
		8, 9, 7, 3, 4, 1, 0, 1, 2, 0, 0, 8, 1, 8, 5, 1, 5, 1, 0, 1, 1, 4, 0, 8,	8, 9, 7, 3, 4, 1, 0, 1, 2, 0, 0, 8,
		7, 2, 8, 0, 0, 9, 6, 2, 1, 5, 1, 3,	1, 8, 5, 1, 5, 1, 0, 1, 1, 4, 0, 8, 7, 2, 8, 0, 0, 9, 6, 2, 1, 5, 1, 3,
		4, 2, 5, 2, 0, 2, 5, 8, 1, 1, 6, 4,	4, 2, 5, 2, 0, 2, 5, 8, 1, 1, 6, 4,
		6, 5, 8, 5, 9, 5, 8, 1, 8, 5, 4, 2,	6, 5, 8, 5, 9, 5, 8, 1, 8, 5, 4, 2,
		0, 5, 5, 0, 1, 9, 7, 1, 1, 7, 6, 1,	0, 5, 5, 0, 1, 9, 7, 1, 1, 7, 6, 1,
		8, 8, 4, 6, 4, 4, 3, 1, 0, 3, 3, 7, 9, 7, 9, 5, 1, 5, 1, 5, 2, 0, 3, 1,	8, 8, 4, 6, 4, 4, 3, 1, 0, 3, 3, 7, 9, 7, 9, 5, 1, 5, 1, 5, 2, 0, 3, 1,
		4, 9, 2, 6, 5, 3, 2, 7, 8, 1, 6, 7,	4, 9, 2, 6, 5, 3, 2, 7, 8, 1, 6, 7,
		0, 2, 7, 6, 1, 5, 8, 3, 5, 0, 4, 7,	0, 2, 7, 6, 1, 5, 8, 3, 5, 0, 4, 7,
		9, 8, 8, 2, 6, 9, 9, 7, 8, 3, 8, 8,	9, 8, 8, 2, 6, 9, 9, 7, 8, 3, 8, 8,
		0, 8, 6, 4, 5, 7, 2, 0, 7, 3, 5, 5,	0, 8, 6, 4, 5, 7, 2, 0, 7, 3, 5, 5,
		3, 5, 6, 2, 3, 3, 1, 2, 4, 4, 4, 5, 5, 4, 9, 7, 0, 8, 0, 4, 3, 0, 9, 7,	3, 5, 6, 2, 3, 3, 1, 2, 4, 4, 4, 5, 5, 4, 9, 7, 0, 8, 0, 4, 3, 0, 9, 7,
		7, 8, 1, 3, 7, 1, 5, 4, 7]	7, 8, 1, 3, 7, 1, 5, 4, 7]
H	int ann[] = [2	_	
	int arr[] = {3, 1, 6, 8, 6, 6, 1, 5, 7, 1, 7, 6, 7, 1, 9, 6, 8, 9, 7, 6, 4,	[3, 1, 6, 8, 6, 6, 1, 5, 7, 1, 7, 6, 7, 1, 9, 6, 8, 9, 7, 6, 4, 0, 3, 8,	[3, 1, 6, 8, 6, 6, 1, 5, 7, 1, 7, 6, ]
	0, 3, 8, 9, 4, 7, 1, 1, 6, 9, 3, 8, 8,	9, 4, 7, 1, 1, 6, 9, 3, 8, 8, 0, 4,	9, 4, 7, 1, 1, 6, 9, 3, 8, 8, 0, 4,
	0, 4, 9, 7, 4, 7, 6, 3, 4, 9, 9, 6, 4,	9, 7, 4, 7, 6, 3, 4, 9, 9, 6, 4, 1,	9, 7, 4, 7, 6, 3, 4, 9, 9, 6, 4, 1,
	1, 1, 4, 8, 8, 1, 6, 5, 2, 8, 5, 3, 9,	1, 4, 8, 8, 1, 6, 5, 2, 8, 5, 3, 9,	1, 4, 8, 8, 1, 6, 5, 2, 8, 5, 3, 9,
	0, 8, 9, 1, 6, 9, 3, 9, 6, 9, 9, 9, 3,		0, 8, 9, 1, 6, 9, 3, 9, 6, 9, 9, 9,
	8, 8, 3, 0, 7, 8, 9, 1, 9, 2, 5, 6, 4, 3, 1, 9, 1, 0, 0, 8, 2, 1, 7, 7, 3, 3,		3, 8, 8, 3, 0, 7, 8, 9, 1, 9, 2, 5, 6, 4, 3, 1, 9, 1, 0, 0, 8, 2, 1, 7,
	5, 6, 0, 5, 5, 6, 9, 7, 0, 9, 4, 5, 8,	7, 3, 3, 5, 6, 0, 5, 5, 6, 9, 7, 0,	7, 3, 3, 5, 6, 0, 5, 5, 6, 9, 7, 0,
	6, 5, 1, 3, 4, 7, 4, 4, 6, 6, 9, 8, 2,	9, 4, 5, 8, 6, 5, 1, 3, 4, 7, 4, 4,	9, 4, 5, 8, 6, 5, 1, 3, 4, 7, 4, 4,
	4, 1, 0, 6, 0, 6, 0, 6, 2, 4, 5, 6, 5,	6, 6, 9, 8, 2, 4, 1, 0, 6, 0, 6, 0,	6, 6, 9, 8, 2, 4, 1, 0, 6, 0, 6, 0,
	6, 2, 1, 1, 6, 4, 0, 6, 8, 7, 3, 9, 6,		6, 2, 4, 5, 6, 5, 6, 2, 1, 1, 6, 4,
	2, 6, 9, 3, 6, 0, 6, 2, 2, 3, 5, 0, 5, 6, 5, 1, 4, 0, 8, 9, 4, 3, 1, 9, 6, 3,		0, 6, 8, 7, 3, 9, 6, 2, 6, 9, 3, 6, 0, 6, 2, 2, 3, 5, 0, 5, 6, 5, 1, 4,
	0, 0, 2, 0, 8, 8, 2, 1, 1, 8, 0, 0, 9,		0, 8, 9, 4, 3, 1, 9, 6, 3, 0, 0, 2,
	2, 9, 7, 3, 3, 9, 8, 6, 4, 7, 7, 4, 7,	0, 8, 8, 2, 1, 1, 8, 0, 0, 9, 2, 9,	0, 8, 8, 2, 1, 1, 8, 0, 0, 9, 2, 9,
	4, 8, 3, 9, 3, 0, 7, 0, 2, 0, 6, 4, 1,		7, 3, 3, 9, 8, 6, 4, 7, 7, 4, 7, 4,
	2, 2, 1, 4, 4, 7, 7, 0, 9, 4, 4, 6, 3,		8, 3, 9, 3, 0, 7, 0, 2, 0, 6, 4, 1,
	8, 6, 4, 2, 8, 2, 8, 9, 1, 7, 1, 4, 2, 9, 7, 8, 3, 4, 5, 7, 5, 0, 0, 1, 8, 9,		2, 2, 1, 4, 4, 7, 7, 0, 9, 4, 4, 6, 3, 8, 6, 4, 2, 8, 2, 8, 9, 1, 7, 1,
	7, 8, 1, 4, 2, 9, 3, 9, 1, 4, 2, 1, 1,		4, 2, 9, 7, 8, 3, 4, 5, 7, 5, 0, 0,
	3, 6, 1, 4, 2, 1, 5, 9, 9, 9, 2, 0, 3,	1, 8, 9, 7, 8, 1, 4, 2, 9, 3, 9, 1,	1, 8, 9, 7, 8, 1, 4, 2, 9, 3, 9, 1,
	2, 5, 7, 5, 4, 8, 0, 1, 7, 5, 2, 5, 2,		4, 2, 1, 1, 3, 6, 1, 4, 2, 1, 5, 9,
	2, 1, 2, 8, 2, 9, 7, 7, 7, 6, 6, 8, 3, 8, 2, 0, 8, 1, 9, 1, 6, 8, 6, 6, 6, 4,		9, 9, 2, 0, 3, 2, 5, 7, 5, 4, 8, 0,
	3, 0, 6, 8, 7, 0, 5, 0, 0, 2, 8, 6, 7,		1, 7, 5, 2, 5, 2, 2, 1, 2, 8, 2, 9,       7, 7, 7, 6, 6, 8, 3, 8, 2, 0, 8, 1,
	0, 4, 0, 3, 1, 9, 9, 4, 6, 7, 0, 8, 4,		9, 1, 6, 8, 6, 6, 6, 4, 3, 0, 6, 8,
	1, 0, 8, 0, 7, 7, 1, 0, 7, 2, 5, 7, 5,	7, 0, 5, 0, 0, 2, 8, 6, 7, 0, 4, 0,	7, 0, 5, 0, 0, 2, 8, 6, 7, 0, 4, 0,
	2, 9, 5, 3, 1, 8, 2, 8, 3, 4, 9, 3, 9,		3, 1, 9, 9, 4, 6, 7, 0, 8, 4, 1, 0,
	3, 5, 6, 9, 9, 0, 9, 6, 3, 7, 8, 6, 1, 2, 2, 3, 8, 2, 4, 5, 0, 5, 8, 3, 2, 8,		8, 0, 7, 7, 1, 0, 7, 2, 5, 7, 5, 2, 9, 5, 3, 1, 8, 2, 8, 3, 4, 9, 3, 9,
	6, 9, 0, 5, 7, 4, 2, 2, 9, 9, 2, 7, 0,		3, 5, 6, 9, 9, 0, 9, 6, 3, 7, 8, 6,
	5, 0, 8, 7, 1, 6, 3, 3, 7, 9, 9, 9, 8,		1, 2, 2, 3, 8, 2, 4, 5, 0, 5, 8, 3,
	6, 9, 9, 8, 9, 2, 8, 6, 4, 2, 1, 6, 6,		2, 8, 6, 9, 0, 5, 7, 4, 2, 2, 9, 9,
	0, 9, 8, 2, 1, 9, 4, 7, 7, 9, 6, 7, 0,		2, 7, 0, 5, 0, 8, 7, 1, 6, 3, 3, 7,
	6, 6, 6, 7, 0, 2, 6, 2, 3, 4, 0, 8, 1, 8, 4, 8, 3, 8, 6, 8, 6, 5, 9, 5, 9, 8,	9, 9, 9, 8, 6, 9, 9, 8, 9, 2, 8, 6, 4, 2, 1, 6, 6, 0, 9, 8, 2, 1, 9, 4,	9, 9, 9, 8, 6, 9, 9, 8, 9, 2, 8, 6, 4, 2, 1, 6, 6, 0, 9, 8, 2, 1, 9, 4,
	9, 1, 1, 6, 7, 6, 1, 1, 3, 9, 3, 4, 1,	7, 7, 9, 6, 7, 0, 6, 6, 6, 7, 0, 2,	7, 7, 9, 6, 7, 0, 6, 6, 6, 7, 0, 2,
	6, 8, 5, 6, 9, 9, 0, 9, 7, 3, 4, 7, 4,		6, 2, 3, 4, 0, 8, 1, 8, 4, 8, 3, 8,
	0, 6, 6, 0, 6, 6, 3, 1, 9, 3, 9, 1, 2,	6, 8, 6, 5, 9, 5, 9, 8, 9, 1, 1, 6,	6, 8, 6, 5, 9, 5, 9, 8, 9, 1, 1, 6,
	0, 3, 5, 4, 5, 8, 2, 0, 5, 3, 2, 2, 0, 9, 8, 3, 8, 0, 6, 3, 3, 5, 6, 8, 6, 2,	7, 6, 1, 1, 3, 9, 3, 4, 1, 6, 8, 5,	7, 6, 1, 1, 3, 9, 3, 4, 1, 6, 8, 5, 6, 9, 9, 0, 9, 7, 3, 4, 7, 4, 0, 6,

Test	Expected	Got
1, 2, 2, 8, 6, 6, 8, 2, 0, 3, 4, 7, 7,	3, 5, 4, 5, 8, 2, 0, 5, 3, 2, 2, 0,	3, 5, 4, 5, 8, 2, 0, 5, 3, 2, 2, 0,
3, 3, 2, 3, 4, 5, 2, 8, 7, 1, 7, 7, 7,	9, 8, 3, 8, 0, 6, 3, 3, 5, 6, 8, 6,	9, 8, 3, 8, 0, 6, 3, 3, 5, 6, 8, 6,
9, 7, 0, 4, 7, 9, 5, 2, 7, 5, 6, 1, 5,	2, 9, 9, 1, 0, 9, 6, 4, 6, 4, 1, 6,	2, 9, 9, 1, 0, 9, 6, 4, 6, 4, 1, 6,
3, 4, 3, 8, 8, 3, 8, 9, 9, 3, 7, 7, 7,	5, 7, 1, 2, 2, 8, 6, 6, 8, 2, 0, 3,	5, 7, 1, 2, 2, 8, 6, 6, 8, 2, 0, 3,
9, 3, 7, 8, 6, 5, 7, 2, 9, 4, 0, 9, 6,	4, 7, 7, 3, 3, 2, 3, 4, 5, 2, 8, 7,	4, 7, 7, 3, 3, 2, 3, 4, 5, 2, 8, 7,
0, 4, 2, 0, 6, 3, 8, 7, 4, 3, 8, 9, 8,	1, 7, 7, 7, 9, 7, 0, 4, 7, 9, 5, 2,	1, 7, 7, 7, 9, 7, 0, 4, 7, 9, 5, 2,
		7, 5, 6, 1, 5, 3, 4, 3, 8, 8, 3, 8,
		9, 9, 3, 7, 7, 7, 9, 3, 7, 8, 6, 5,
		7, 2, 9, 4, 0, 9, 6, 0, 4, 2, 0, 6,
8, 5, 6, 5, 3, 8, 0, 4, 5, 6, 2, 8, 6,		3, 8, 7, 4, 3, 8, 9, 8, 1, 1, 1, 6,
		9, 8, 4, 5, 2, 8, 2, 3, 3, 6, 5, 5,
	8, 2, 6, 5, 0, 4, 9, 9, 7, 6, 3, 1,	8, 2, 6, 5, 0, 4, 9, 9, 7, 6, 3, 1,
8, 4, 7, 4, 4, 5, 9, 2, 7, 7, 8, 8, 8,	7, 5, 0, 0, 4, 9, 6, 0, 4, 6, 0, 8,	7, 5, 0, 0, 4, 9, 6, 0, 4, 6, 0, 8,
0, 8, 8, 0, 4, 8, 4, 4, 7, 6, 2, 5, 2,	5, 6, 5, 3, 8, 0, 4, 5, 6, 2, 8, 6,	5, 6, 5, 3, 8, 0, 4, 5, 6, 2, 8, 6,
7, 3, 7, 0, 9, 8, 1, 5, 0, 3, 8, 4, 0,	0, 3, 9, 6, 2, 1, 4, 7, 3, 3, 3, 8,	0, 3, 9, 6, 2, 1, 4, 7, 3, 3, 3, 8,
		6, 1, 0, 7, 8, 2, 9, 0, 6, 3, 3, 5,
0, 8, 0, 8, 2, 6, 5, 3, 4, 8, 8, 9, 5,	5, 0, 8, 4, 7, 4, 4, 5, 9, 2, 7, 7,	5, 0, 8, 4, 7, 4, 4, 5, 9, 2, 7, 7,
		8, 8, 8, 0, 8, 8, 0, 4, 8, 4, 4, 7,
		6, 2, 5, 2, 7, 3, 7, 0, 9, 8, 1, 5,
		0, 3, 8, 4, 0, 7, 5, 0, 5, 4, 5, 4,
		9, 6, 3, 5, 8, 1, 0, 8, 0, 8, 2, 6,
		5, 3, 4, 8, 8, 9, 5, 3, 8, 1, 0, 2,
		9, 9, 9, 1, 0, 1, 4, 9, 7, 1, 8, 4,
4, 5, 8, 2, 8, 8, 1, 2, 0, 9, 1, 8, 1,		5, 2, 6, 2, 4, 1, 6, 4, 7, 4, 0, 3,
8, 4, 7, 3, 1, 1, 2, 3, 0, 4, 7, 5, 4,	3, 2, 4, 7, 9, 0, 6, 2, 2, 7, 4, 6,	3, 2, 4, 7, 9, 0, 6, 2, 2, 7, 4, 6,
4, 3, 5, 4, 6, 6, 0, 3, 7, 4, 4, 5, 7,	7, 2, 5, 7, 7, 5, 7, 5, 4, 8, 4, 1,	7, 2, 5, 7, 7, 5, 7, 5, 4, 8, 4, 1,
7, 3, 9, 1, 8, 0, 0, 5, 0, 9, 8, 3, 3,	7, 4, 5, 9, 9, 8, 8, 4, 5, 6, 6, 3,	7, 4, 5, 9, 9, 8, 8, 4, 5, 6, 6, 3,
3, 6, 6, 6, 6, 2, 5, 8, 1, 5, 2, 8, 2,	3, 7, 6, 1, 6, 7, 9, 9, 5, 4, 0, 7,	3, 7, 6, 1, 6, 7, 9, 9, 5, 4, 0, 7,
1, 4, 6, 2, 5, 8, 2, 9, 3, 9, 4, 8, 2,	0, 4, 5, 8, 2, 8, 8, 1, 2, 0, 9, 1,	0, 4, 5, 8, 2, 8, 8, 1, 2, 0, 9, 1,
1, 3, 6, 7, 9, 3, 9, 3, 6, 8, 8, 7, 1,	8, 1, 8, 4, 7, 3, 1, 1, 2, 3, 0, 4,	8, 1, 8, 4, 7, 3, 1, 1, 2, 3, 0, 4,
5, 3, 7, 1, 3, 7, 0, 1, 7, 0, 9, 6, 2,	7, 5, 4, 4, 3, 5, 4, 6, 6, 0, 3, 7,	7, 5, 4, 4, 3, 5, 4, 6, 6, 0, 3, 7,
8, 0, 1, 8, 6, 6, 4, 5, 1, 3, 3, 9, 1,	4, 4, 5, 7, 7, 3, 9, 1, 8, 0, 0, 5,	4, 4, 5, 7, 7, 3, 9, 1, 8, 0, 0, 5,
1, 9, 6, 9, 9, 5, 2, 2, 2, 2, 8, 2, 4,	0, 9, 8, 3, 3, 3, 6, 6, 6, 6, 2, 5,	0, 9, 8, 3, 3, 3, 6, 6, 6, 6, 2, 5,
4, 1, 9, 8, 3, 7, 4, 3, 4, 3, 5, 2, 8,	8, 1, 5, 2, 8, 2, 1, 4, 6, 2, 5, 8,	8, 1, 5, 2, 8, 2, 1, 4, 6, 2, 5, 8,
4, 0, 9, 9, 0, 5, 6, 0, 1, 9, 0, 5, 6,	2, 9, 3, 9, 4, 8, 2, 1, 3, 6, 7, 9,	2, 9, 3, 9, 4, 8, 2, 1, 3, 6, 7, 9,
7, 7, 5, 4, 7, 3, 5, 0, 3, 2, 2, 2, 9,	3, 9, 3, 6, 8, 8, 7, 1, 5, 3, 7, 1,	3, 9, 3, 6, 8, 8, 7, 1, 5, 3, 7, 1,
0, 0, 6, 1, 9, 1, 7, 1, 3, 4, 6, 9, 6,	3, 7, 0, 1, 7, 0, 9, 6, 2, 8, 0, 1,	3, 7, 0, 1, 7, 0, 9, 6, 2, 8, 0, 1,
1, 3, 7, 4, 5, 7, 2, 6, 8, 2, 8, 5, 0,	8, 6, 6, 4, 5, 1, 3, 3, 9, 1, 1, 9,	8, 6, 6, 4, 5, 1, 3, 3, 9, 1, 1, 9,
5, 6, 1, 7, 0, 3, 1, 5, 4, 8, 3, 7, 8,	6, 9, 9, 5, 2, 2, 2, 8, 2, 4, 4,	6, 9, 9, 5, 2, 2, 2, 2, 8, 2, 4, 4,
4, 1, 7, 1, 3, 3, 8, 9, 0, 1, 4, 2, 1,	1, 9, 8, 3, 7, 4, 3, 4, 3, 5, 2, 8,	1, 9, 8, 3, 7, 4, 3, 4, 3, 5, 2, 8,
3, 8, 3, 0, 8, 9, 1, 3, 3, 8, 4, 6, 3,	4, 0, 9, 9, 0, 5, 6, 0, 1, 9, 0, 5,	4, 0, 9, 9, 0, 5, 6, 0, 1, 9, 0, 5,
2, 8, 9, 1, 2, 3, 8, 4, 4, 6, 1, 9, 9,	6, 7, 7, 5, 4, 7, 3, 5, 0, 3, 2, 2,	6, 7, 7, 5, 4, 7, 3, 5, 0, 3, 2, 2,
1, 0, 1, 0, 7, 8, 7, 5, 8, 2, 4, 3, 1,	2, 9, 0, 0, 6, 1, 9, 1, 7, 1, 3, 4,	2, 9, 0, 0, 6, 1, 9, 1, 7, 1, 3, 4,
0, 0, 8, 1, 2, 9, 7, 4, 7, 4, 6, 5, 5,	6, 9, 6, 1, 3, 7, 4, 5, 7, 2, 6, 8,	6, 9, 6, 1, 3, 7, 4, 5, 7, 2, 6, 8,
1, 1, 3, 7, 8, 9, 6, 3, 0, 9, 7, 9, 6,	2, 8, 5, 0, 5, 6, 1, 7, 0, 3, 1, 5,	2, 8, 5, 0, 5, 6, 1, 7, 0, 3, 1, 5,
1, 2, 7, 2, 1, 2, 8, 0, 1, 2, 7, 3, 4,	4, 8, 3, 7, 8, 4, 1, 7, 1, 3, 3, 8,	4, 8, 3, 7, 8, 4, 1, 7, 1, 3, 3, 8,
3, 6, 8, 7, 1, 7, 6, 7, 9, 5, 7, 2, 8,	9, 0, 1, 4, 2, 1, 3, 8, 3, 0, 8, 9,	9, 0, 1, 4, 2, 1, 3, 8, 3, 0, 8, 9,
1, 1, 8, 7, 4, 6, 5, 7, 7, 0, 3, 8, 0,	1, 3, 3, 8, 4, 6, 3, 2, 8, 9, 1, 2,	1, 3, 3, 8, 4, 6, 3, 2, 8, 9, 1, 2,
5, 3, 6, 1, 0, 0, 5, 5, 9, 8, 9, 2, 2,	3, 8, 4, 4, 6, 1, 9, 9, 1, 0, 1, 0,	3, 8, 4, 4, 6, 1, 9, 9, 1, 0, 1, 0,
0, 5, 0, 9, 4, 4, 6, 8, 5, 9, 7, 1, 4,	7, 8, 7, 5, 8, 2, 4, 3, 1, 0, 0, 8,	7, 8, 7, 5, 8, 2, 4, 3, 1, 0, 0, 8,
6, 4, 5, 1, 5, 2, 2, 7, 3, 6, 4, 9, 2,	1, 2, 9, 7, 4, 7, 4, 6, 5, 5, 1, 1,	1, 2, 9, 7, 4, 7, 4, 6, 5, 5, 1, 1,
9, 7, 8, 1, 5, 5, 8, 4, 5, 6, 4, 1, 1,	3, 7, 8, 9, 6, 3, 0, 9, 7, 9, 6, 1,	3, 7, 8, 9, 6, 3, 0, 9, 7, 9, 6, 1,
8, 0, 6, 8, 9, 4, 8, 4, 2, 4, 0, 1, 3,	2, 7, 2, 1, 2, 8, 0, 1, 2, 7, 3, 4,	2, 7, 2, 1, 2, 8, 0, 1, 2, 7, 3, 4,
7, 6, 5, 7, 8, 3, 6, 8, 7, 8, 3, 3, 8,	3, 6, 8, 7, 1, 7, 6, 7, 9, 5, 7, 2,	3, 6, 8, 7, 1, 7, 6, 7, 9, 5, 7, 2,
9, 9, 9, 1, 0, 3, 0, 2, 0, 3, 7, 1, 2,	8, 1, 1, 8, 7, 4, 6, 5, 7, 7, 0, 3,	8, 1, 1, 8, 7, 4, 6, 5, 7, 7, 0, 3,
1, 1, 6, 5, 0, 2, 6, 8, 7, 5, 0, 7, 1,	8, 0, 5, 3, 6, 1, 0, 0, 5, 5, 9, 8,	8, 0, 5, 3, 6, 1, 0, 0, 5, 5, 9, 8,
7, 7, 0, 5, 2, 2, 2, 8, 6, 9, 4, 7, 7,	9, 2, 2, 0, 5, 0, 9, 4, 4, 6, 8, 5,	9, 2, 2, 0, 5, 0, 9, 4, 4, 6, 8, 5,
7, 0, 0, 4, 9, 7, 5, 8, 5, 5, 4, 5, 2,	9, 7, 1, 4, 6, 4, 5, 1, 5, 2, 2, 7,	9, 7, 1, 4, 6, 4, 5, 1, 5, 2, 2, 7,
2, 4, 2, 0, 2, 5, 3, 1, 2, 3, 6, 8, 0,	3, 6, 4, 9, 2, 9, 7, 8, 1, 5, 5, 8,	3, 6, 4, 9, 2, 9, 7, 8, 1, 5, 5, 8,
0, 3, 4, 5, 2, 8,snip, 9, 9,	4, 5, 6, 4, 1, 1, 8, 0, 6, 8, 9, 4,	4, 5, 6, 4, 1, 1, 8, 0, 6, 8, 9, 4,
	8, 4, 2, 4, 0, 1, 3, 7, 6, 5, 7, 8,	8, 4, 2, 4, 0, 1, 3, 7, 6, 5, 7, 8,
4, 2, 9, 7, 8, 4, 4, 9, 7, 4, 0, 8, 3,		
	3, 6, 8, 7, 8, 3, 3, 8, 9, 9, 9, 1,	3, 6, 8, 7, 8, 3, 3, 8, 9, 9, 9, 1,
2, 8, 0, 8, 7, 1, 9, 4, 2, 5, 1, 2, 3,		3, 6, 8, 7, 8, 3, 3, 8, 9, 9, 9, 1, 0, 3, 0, 2, 0, 3, 7, 1, 2, 1, 1, 6,
2, 8, 0, 8, 7, 1, 9, 4, 2, 5, 1, 2, 3, 9, 1, 2, 6, 0, 5, 0, 9, 1, 6, 7, 6, 6,	0, 3, 0, 2, 0, 3, 7, 1, 2, 1, 1, 6,	

Test	Expected	Got
7, 6, 5, 3, 4, 1, 0, 4, 8, 2, 2, 0, 6,	0, 0, 4, 9, 7, 5, 8, 5, 5, 4, 5, 2,	0, 0, 4, 9, 7, 5, 8, 5, 5, 4, 5, 2,
4, 4, 0, 9, 8, 6, 5, 1, 8, 3, 9, 9, 4,	2, 4, 2, 0, 2, 5, 3, 1, 2, 3, 6, 8,	2, 4, 2, 0, 2, 5, 3, 1, 2, 3, 6, 8,
9, 5, 6, 2, 4, 8, 6, 7, 9, 2, 7, 7, 5,	0, 0, 3, 4, 5, 2, 8, 6, 8, 9, 2,	0, 0, 3, 4, 5, 2, 8, 6, 8, 9, 2,
4, 6, 2, 0, 6, 2, 3, 7, 8, 8, 0, 7, 8,	snip 7, 8, 2, 8, 6, 3, 4, 1,	snip 7, 8, 2, 8, 6, 3, 4, 1,
2, 9, 7, 2, 1, 4, 4, 8, 2, 0, 1, 9, 6,	0, 2, 4, 7, 0, 2, 4, 8, 2, 6, 2, 1,	0, 2, 4, 7, 0, 2, 4, 8, 2, 6, 2, 1,
5, 7, 5, 9, 6, 4, 4, 0, 7, 9, 7, 0, 9,	0, 5, 1, 5, 0, 6, 1, 0, 9, 8, 6, 9,	0, 5, 1, 5, 0, 6, 1, 0, 9, 8, 6, 9,
1, 6, 5, 2, 6, 2, 1, 7, 7, 5, 0, 9, 5,	5, 7, 5, 3, 6, 0, 5, 9, 0, 9, 9, 0,	5, 7, 5, 3, 6, 0, 5, 9, 0, 9, 9, 0,
0, 6, 2, 9, 0, 1, 4, 5, 4, 5, 7, 8, 9,	3, 0, 9, 3, 9, 6, 5, 3, 2, 8, 9, 0,	3, 0, 9, 3, 9, 6, 5, 3, 2, 8, 9, 0,
6, 7, 7, 4, 2, 7, 1, 0, 9, 2, 0, 8, 2,	0, 7, 5, 1, 1, 2, 1, 4, 0, 2, 0, 7,	0, 7, 5, 1, 1, 2, 1, 4, 0, 2, 0, 7,
9, 2, 9, 1, 4, 7, 2, 6, 6, 7, 4, 4, 4,	1, 4, 5, 5, 6, 2, 6, 1, 0, 4, 0, 7,	1, 4, 5, 5, 6, 2, 6, 1, 0, 4, 0, 7,
8, 5, 3, 7, 2, 7, 5, 2, 3, 0, 7, 5, 9,	1, 3, 3, 4, 5, 0, 7, 1, 0, 9, 8, 7,	1, 3, 3, 4, 5, 0, 7, 1, 0, 9, 8, 7,
8, 1, 2, 8, 1, 4, 0, 4, 7, 0, 0, 3, 7,	0, 0, 8, 2, 5, 3, 2, 7, 4, 9, 0, 6,	0, 0, 8, 2, 5, 3, 2, 7, 4, 9, 0, 6,
0, 6, 6, 3, 3, 7, 0, 4, 7, 4, 3, 9, 3,	0, 7, 4, 7, 2, 8, 6, 3, 9, 7, 0, 6,	0, 7, 4, 7, 2, 8, 6, 3, 9, 7, 0, 6,
2, 1, 2, 1, 9, 4, 1, 3, 9, 7, 6, 1, 4,	3, 9, 6, 7, 7, 4, 6, 9, 7, 5, 9, 9,	3, 9, 6, 7, 7, 4, 6, 9, 7, 5, 9, 9,
2, 5, 0, 1, 8, 7, 4, 2, 6, 7, 1, 8, 8,	4, 8, 3, 3, 6, 6, 6, 7, 5, 4, 7, 0,	4, 8, 3, 3, 6, 6, 6, 7, 5, 4, 7, 0,
6, 7, 4, 0, 9, 5, 6, 2, 8, 5, 4, 8, 1,	6, 2, 9, 7, 4, 2, 3, 9, 3, 9, 6, 0,	6, 2, 9, 7, 4, 2, 3, 9, 3, 9, 6, 0,
6, 7, 2, 4, 5, 1, 9, 7, 9, 9, 5, 2, 7,	7, 8, 0, 0, 7, 9, 1, 6, 0, 7, 1, 6,	7, 8, 0, 0, 7, 9, 1, 6, 0, 7, 1, 6,
3, 2, 2, 5, 8, 2, 2, 3, 9, 6, 2, 1, 7,	1, 0, 9, 1, 0, 9, 1, 8, 3, 6, 8, 1,	1, 0, 9, 1, 0, 9, 1, 8, 3, 6, 8, 1,
7, 4, 8, 6, 3, 4, 8, 4, 9, 7, 8, 4, 8,	2, 8, 5, 9, 7, 1, 1, 5, 4, 5, 7, 5,	2, 8, 5, 9, 7, 1, 1, 5, 4, 5, 7, 5,
2, 5, 8, 0, 5, 5, 7, 0, 0, 5, 3, 7, 0,	9, 4, 9, 5, 4, 2, 4, 4, 1, 1, 3, 1,	9, 4, 9, 5, 4, 2, 4, 4, 1, 1, 3, 1,
9, 1, 5, 1, 1, 5, 3, 0, 4, 5, 7, 8, 1,	9, 8, 6, 4, 1, 2, 2, 4, 2, 9, 8, 2,	9, 8, 6, 4, 1, 2, 2, 4, 2, 9, 8, 2,
3, 9, 5, 7, 1, 8, 1, 0, 1, 8, 7, 1, 0,	4, 9, 0, 3, 6, 1, 1, 8, 4, 2, 0, 7,	4, 9, 0, 3, 6, 1, 1, 8, 4, 2, 0, 7,
9, 1, 1, 5, 0, 8, 9, 0, 6, 4, 5, 2, 1,	6, 7, 3, 9, 7, 0, 9, 8, 6, 0, 5, 1,	6, 7, 3, 9, 7, 0, 9, 8, 6, 0, 5, 1,
8, 5, 6, 7, 6, 7, 3, 0, 1, 6, 8, 6, 5,	8, 0, 2, 9, 5, 5, 8, 5, 3, 9, 8, 7,	8, 0, 2, 9, 5, 5, 8, 5, 3, 9, 8, 7,
4, 6, 4, 6, 8, 7, 3, 9, 3, 2, 4, 2, 8,	0, 4, 8, 2, 2, 6, 8, 4, 1, 4, 7, 2,	0, 4, 8, 2, 2, 6, 8, 4, 1, 4, 7, 2,
0, 3, 8, 3, 8, 7, 6, 1, 7, 5, 2, 2, 0,	2, 1, 0, 6, 4, 8, 9, 5, 1, 0, 2, 6,	2, 1, 0, 6, 4, 8, 9, 5, 1, 0, 2, 6,
0, 8, 9, 6, 9, 3, 3, 9, 3, 3, 9, 1, 3,	3, 9, 1, 2, 0, 1, 3, 6, 4, 7, 0, 0,	3, 9, 1, 2, 0, 1, 3, 6, 4, 7, 0, 0,
4, 9, 2, 6, 3, 0, 5, 3, 0, 5, 8, 6, 0,	5, 6, 7, 3, 2, 6, 8, 8, 5, 4, 8, 4,	5, 6, 7, 3, 2, 6, 8, 8, 5, 4, 8, 4,
6, 7, 4, 3, 0, 2, 0, 2, 3, 7, 8, 1, 1,	5, 0, 2, 8, 1, 2, 9, 9, 5, 1, 4, 8,	5, 0, 2, 8, 1, 2, 9, 9, 5, 1, 4, 8,
3, 8, 7, 9, 4, 6, 2, 0, 4, 6, 1, 9, 7,	8, 1, 3, 9, 2, 8, 6, 1, 0, 8, 7, 3,	8, 1, 3, 9, 2, 8, 6, 1, 0, 8, 7, 3,
8, 0, 3, 2, 5, 0, 2, 4, 1, 0, 4, 5, 2,	7, 3, 6, 9, 7, 1, 7, 9, 3, 3, 8, 7,	7, 3, 6, 9, 7, 1, 7, 9, 3, 3, 8, 7,
8, 8, 5, 8, 3, 4, 9, 4, 6, 8, 2, 2, 8,	9, 1, 9, 1, 9, 4, 1, 1, 0, 3, 6, 7,	9, 1, 9, 1, 9, 4, 1, 1, 0, 3, 6, 7,
1, 1, 1, 6, 9, 6, 1, 3, 6, 4, 9, 4, 5,	5, 3, 7, 8, 8, 1, 4, 9, 0, 3, 9, 9,	5, 3, 7, 8, 8, 1, 4, 9, 0, 3, 9, 9,
4, 0, 4, 2, 9, 6, 5, 2, 3, 3, 6, 3, 5,	6, 4, 8, 2, 6, 7, 9, 0, 3, 9, 0, 6,	6, 4, 8, 2, 6, 7, 9, 0, 3, 9, 0, 6,
8, 6, 3, 8, 2, 3, 8, 1, 6, 5, 8, 9, 7,	8, 9, 2, 1, 2, 5, 0, 8, 8, 4, 5, 6,	8, 9, 2, 1, 2, 5, 0, 8, 8, 4, 5, 6,
6, 2, 5, 8, 6, 2, 2, 1, 1, 7, 9, 0, 9,	3, 7, 5, 2, 0, 0, 2, 1, 2, 4, 7, 8,	3, 7, 5, 2, 0, 0, 2, 1, 2, 4, 7, 8,
7, 2, 4, 3, 4, 1, 4, 0, 4, 4, 6, 8, 6,	3, 0, 8, 2, 1, 4, 5, 1, 7, 6, 4, 1,	3, 0, 8, 2, 1, 4, 5, 1, 7, 6, 4, 1,
8, 8, 9, 2, 9, 4, 3, 3, 0, 0, 6, 1, 2,	3, 5, 3, 7, 3, 9, 2, 8, 8, 0, 6, 1,	3, 5, 3, 7, 3, 9, 2, 8, 8, 0, 6, 1,
3, 9, 2, 4, 9, 1, 9, 2, 0, 8, 9, 0, 1,	0, 2, 5, 3, 2, 1, 4, 4, 1, 6, 2, 8,	0, 2, 5, 3, 2, 1, 4, 4, 1, 6, 2, 8,
0, 0, 6, 5, 7, 3, 9, 0, 2, 3, 8, 3, 2,	7, 2, 8, 1, 4, 7, 0, 6, 0, 5, 5, 0,	7, 2, 8, 1, 4, 7, 0, 6, 0, 5, 5, 0,
9, 1, 3, 8, 2, 4, 5, 2, 5, 6, 1, 4, 7,	9, 6, 0, 6, 8, 6, 7, 7, 3, 9, 0, 2,	9, 6, 0, 6, 8, 6, 7, 7, 3, 9, 0, 2,
1, 2, 2, 4, 2, 8, 2, 1, 0, 5, 7, 7, 8,	9, 0, 6, 7, 4, 7, 3, 3, 1, 1, 3, 7,	9, 0, 6, 7, 4, 7, 3, 3, 1, 1, 3, 7,
5, 2, 2, 4, 4, 2, 6, 6, 7, 3, 9, 1, 9,	0, 3, 2, 4, 1, 6, 4, 2, 9, 3, 8, 3,	0, 3, 2, 4, 1, 6, 4, 2, 9, 3, 8, 3,
2, 2, 1, 3, 4, 0, 7, 9, 2, 9, 1, 0, 4,	1, 3, 4, 8, 4, 3, 6, 3, 4, 6, 7, 8,	1, 3, 4, 8, 4, 3, 6, 3, 4, 6, 7, 8,
6, 9, 5, 0, 2, 5, 8, 6, 8, 0, 6, 4, 6,	3, 0, 7, 2, 3, 3, 9, 6, 8, 3, 0, 3,	3, 0, 7, 2, 3, 3, 9, 6, 8, 3, 0, 3,
3, 5, 6, 2, 1, 3, 5, 7, 7, 7, 8, 0, 4,	1, 2, 2, 7, 7, 1, 9, 7, 8, 0, 6, 1,	1, 2, 2, 7, 7, 1, 9, 7, 8, 0, 6, 1,
8, 6, 4, 4, 6, 1, 6, 9, 0, 0, 8, 3, 6,	7, 4, 2, 1, 5, 5, 1, 4, 7, 7, 8, 6,	7, 4, 2, 1, 5, 5, 1, 4, 7, 7, 8, 6,
4, 1, 8, 5, 9, 1, 4, 5, 1, 9, 4, 2, 3,	3, 2, 4, 7, 4, 3, 5, 0, 4, 5, 5, 9,	3, 2, 4, 7, 4, 3, 5, 0, 4, 5, 5, 9,
0, 7, 8, 1, 0, 9, 8, 7, 5, 9, 3, 5, 7,	4, 1, 2, 0, 4, 6, 3, 3, 2, 9, 4, 1,	4, 1, 2, 0, 4, 6, 3, 3, 2, 9, 4, 1,
6, 7, 3, 2, 4, 6, 2, 6, 8, 8, 7, 5, 5,	4, 8, 3, 7, 2, 3, 3, 4, 5, 9, 0, 1,	4, 8, 3, 7, 2, 3, 3, 4, 5, 9, 0, 1,
4, 6, 4, 3, 4, 4, 4, 8, 7, 3, 4, 1, 3,	0, 8, 5, 1, 1, 7, 4, 8, 6, 1, 0, 9,	0, 8, 5, 1, 1, 7, 4, 8, 6, 1, 0, 9,
8, 1, 4, 4, 7, 8, 6, 9, 6, 8, 2, 4, 6,	5, 5, 3, 9, 8, 0, 0, 8, 1, 0, 8, 8,	5, 5, 3, 9, 8, 0, 0, 8, 1, 0, 8, 8,
7, 5, 0, 6, 1, 0, 9, 7, 7, 8, 0, 0, 3,	7, 3, 6, 2, 3, 0, 8, 2, 5, 2, 2, 3,	7, 3, 6, 2, 3, 0, 8, 2, 5, 2, 2, 3,
4, 9, 4, 6, 6, 8, 7, 2, 4, 4, 4, 9, 3,	3, 2, 2, 9, 4, 4, 4, 1, 0, 8, 3, 4,	3, 2, 2, 9, 4, 4, 4, 1, 0, 8, 3, 4,
2, 1, 3, 6, 1, 1, 6, 1, 9, 2, 5, 7, 7,	8, 9, 1, 1, 0, 8, 2, 6, 0, 9, 3, 5,	8, 9, 1, 1, 0, 8, 2, 6, 0, 9, 3, 5,
3, 5, 8, 5, 4, 9, 1, 1, 5, 6, 2, 0, 4,	6, 3, 8, 5, 4, 5, 8, 9, 0, 3, 9, 8,	6, 3, 8, 5, 4, 5, 8, 9, 0, 3, 9, 8,
2, 3, 6, 3, 9, 8, 5, 4, 8, 5, 9, 6, 5,	9, 8, 3, 5, 4, 5, 4, 3, 8, 0, 3, 4,	9, 8, 3, 5, 4, 5, 4, 3, 8, 0, 3, 4,
8, 2, 0, 8, 8, 3, 2, 0, 9, 8, 9, 7, 5,	5, 1, 3, 4, 6, 7, 9, 6, 5, 4, 1, 1,	5, 1, 3, 4, 6, 7, 9, 6, 5, 4, 1, 1,
9, 9, 0, 8, 8, 4, 2, 0, 2, 6, 4, 6, 2,	6, 5, 2, 0, 7, 5, 3, 7, 5, 1, 4, 4,	6, 5, 2, 0, 7, 5, 3, 7, 5, 1, 4, 4,
2, 1, 7, 4, 5, 2, 9, 7, 4, 7, 5, 8, 6,	9, 6, 0, 7, 1, 7, 6, 6, 9, 5, 3, 9,	9, 6, 0, 7, 1, 7, 6, 6, 9, 5, 3, 9,
	2, 7, 6, 8, 5, 5, 3, 7, 2, 4, 7, 5,	2, 7, 6, 8, 5, 5, 3, 7, 2, 4, 7, 5,
5, 1, 6, 8, 5, 1, 4, /, 5, 2, /, 8, 2,		
5, 1, 6, 8, 5, 1, 4, 7, 5, 2, 7, 8, 2, 5, 5, 3, 5, 2, 5, 4, 6, 8, 3, 8, 4, 0,	4, 0, 9, 4, 9, 3, 8, 6, 5, 5, 5, 8.	4, 0, 9, 4, 9, 3, 8, 6, 5, 5, 5, 8.
5, 5, 3, 5, 2, 5, 4, 6, 8, 3, 8, 4, 0,	4, 0, 9, 4, 9, 3, 8, 6, 5, 5, 5, 8, 2, 8, 8, 9, 5, 7, 4, 8, 4, 9, 3, 2,	4, 0, 9, 4, 9, 3, 8, 6, 5, 5, 5, 8, 2, 8, 8, 9, 5, 7, 4, 8, 4, 9, 3, 2,
	4, 0, 9, 4, 9, 3, 8, 6, 5, 5, 5, 8, 2, 8, 8, 9, 5, 7, 4, 8, 4, 9, 3, 2, 2, 6, 0, 6, 4, 4, 5, 9, 4, 5, 9, 4,	4, 0, 9, 4, 9, 3, 8, 6, 5, 5, 5, 8, 2, 8, 8, 9, 5, 7, 4, 8, 4, 9, 3, 2, 2, 6, 0, 6, 4, 4, 5, 9, 4, 5, 9, 4,

	Test	Expected	Got
	Test  7, 6, 8, 9, 9, 0, 5, 7, 5, 0, 6, 2, 4, 4, 3, 7, 7, 6, 7, 2, 8, 5, 2, 8, 4, 2, 9, 6, 5, 4, 1, 3, 7, 8, 4, 4, 7, 0, 2, 2, 2, 0, 2, 4, 9, 5, 3, 1, 1, 1, 1, 3, 6, 2, 3, 2, 4, 0, 3, 0, 0, 0, 9, 6, 7, 5, 6, 7, 8, 1, 9, 1, 2, 4, 2, 4, 3, 3, 1, 0, 5, 8, 6, 7, 6, 1, 4, 7, 5, 4, 4, 0, 6, 7, 1, 8, 9, 9, 9, 8, 8, 6, 4, 6, 8, 1, 2, 2, 7, 9, 6, 8, 6, 4, 9, 2, 3, 0, 5, 7, 2, 3, 1, 9, 7, 1, 7, 0, 3, 9, 5, 7, 2, 1, 5, 6, 1, 5, 3, 8, 0, 1, 1, 0, 6, 1, 5, 1, 5, 5, 9, 8, 9, 0, 5, 5, 8, 8, 2, 6, 6, 7, 7, 9, 5, 6, 4, 2, 3, 3, 0, 5, 8, 4, 7, 1, 5, 2, 3, 4, 3, 8, 6, 4, 0, 9, 8, 3, 8, 4, 3, 7, 9, 4, 3, 1, 7, 8, 6, 5, 8, 5, 6, 4, 0, 6, 6, 2, 9, 3, 9, 8, 5, 4, 7, 3, 7, 8, 9, 7, 9, 5, 3, 2, 4, 1, 2, 2, 9, 1, 9, 0, 4, 3, 6, 1, 6, 1, 1, 5, 2, 8, 6, 0, 9, 0, 6, 9, 0, 3, 0, 9, 8, 7, 3, 3, 1, 0, 7, 2, 1, 3, 3, 7, 7, 6, 9, 1, 3, 8, 5, 6, 2, 8, 8, 3, 7, 7, 6, 9, 1, 3, 8, 5, 6, 2, 8, 8, 3, 7, 7, 6, 9, 1, 3, 8, 5, 6, 2, 8, 8, 3, 7, 7, 6, 9, 1, 3, 8, 5, 6, 2, 8, 8, 3, 7, 7, 6, 9, 1, 3, 8, 5, 6, 2, 8, 8, 3, 7, 7, 6, 9, 1, 3, 8, 5, 6, 2, 8, 8, 3, 7, 7, 6, 9, 1, 3, 8, 5, 6, 2, 8, 8, 3, 7, 7, 6, 9, 1, 3, 8, 5, 6, 2, 8, 8, 3, 7, 7, 6, 9, 1, 3, 8, 5, 6, 2, 8, 8, 3, 7, 7, 6, 9, 1, 3, 8, 5, 6, 2, 8, 8, 3, 7, 7, 6, 9, 1, 3, 8, 5, 6, 2, 8, 8, 3, 7, 7, 6, 9, 1, 3, 8, 5, 6, 2, 8, 8, 3, 7, 7, 6, 9, 1, 3, 8, 5, 6, 2, 8, 8, 3, 7, 7, 6, 9, 1, 3, 8, 5, 6, 2, 8, 8, 3, 7, 7, 6, 9, 1, 3, 8, 5, 6, 2, 8, 8, 3, 7, 7, 6, 9, 1, 3, 8, 5, 6, 7, 2, 5, 8, 5, 6, 7, 2, 5, 3, 4, 6, 4, 4};  int k = 1000;  LLNode* head =  LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int));  LLNode* newhead = rotateLinkedList(head, k);  LLNode* newhead = rotateLinkedList(newhead);	0, 5, 5, 8, 5, 7, 4, 9, 6, 3, 5, 7, 8, 1, 8, 7, 4, 2, 1, 7, 0, 5, 3, 5, 4, 7, 3, 7, 3, 9, 2, 3, 0, 5, 1, 9, 9, 1, 3, 0, 0, 8, 8, 5, 3, 0, 0, 7, 8, 1, 0, 7, 5, 2, 4, 9, 8, 6, 0, 3, 2, 6, 4, 0, 5, 1, 4, 2, 5, 6, 9, 2, 1, 9, 3, 1, 0, 7, 0, 8, 5, 8, 0, 8, 5, 6, 5, 4, 4, 2, 1, 6, 5, 5, 4, 7, 0, 3, 6, 2, 0, 8, 8, 6, 3, 1, 7, 0, 5, 4, 7, 7, 0, 9, 1, 5, 4, 4, 1, 9, 3, 7, 9, 9, 3, 2, 8, 5, 4, 9, 2, 2, 0, 5, 1, 8, 3, 6, 7, 2, 7, 7, 0, 3, 5, 2, 6, 8, 4, 6, 2, 7, 0, 1, 5, 3, 2, 0, 3, 2, 6, 9, 2, 5, 8, 3, 6, 3, 0, 4, 9, 8, 1, 2, 4, 9, 6, 3, 3, 2, 7, 2, 8, 2, 1, 0, 5, 1, 7, 1, 2, 7, 1, 5, 4, 2, 5, 4, 3, 0, 2, 9, 3, 9, 5, 9, 4, 4, 1, 5, 1, 7, 5, 6, 3, 2, 2, 8, 1, 8, 7, 0, 6, 7, 3, 4, 7, 4, 1, 2, 9, 8, 8, 1, 7, 2, 2, 8, 3, 9, 9, 8, 8, 4, 8, 4, 6, 4, 1, 7, 3, 8, 4, 3, 1, 6, 4, 6, 1, 0, 1, 3, 8, 4, 3, 0, 7, 8, 1, 2, 6, 8, 4, 7, 4, 8, 8, 9, 3, 6, 6, 9, 4, 2, 4, 7, 3, 2, 3, 1, 6, 7, 0, 2, 4, 7, 9, 0, 0, 0, 4, 0, 2, 4, 0, 7, 8, 0, 5, 9, 2, 9, 5, 3, 3, 3, 5, 0, 9, 8, 7, 5, 9, 5, 0, 1, 2, 4, 7, 4, 9, 9, 4, 2, 9, 7, 8, 4, 4, 9, 7, 4, 9, 9, 4, 2, 9, 7, 8, 4, 4, 9, 7, 4, 0, 8, 3, 2, 8, 0,	0, 5, 5, 8, 5, 7, 4, 9, 6, 3, 5, 7,           8, 1, 8, 7, 4, 2, 1, 7, 0, 5, 3, 5,           4, 7, 3, 7, 3, 9, 2, 3, 0, 5, 1, 9,           9, 1, 3, 0, 0, 8, 8, 5, 3, 0, 0, 7,           8, 1, 0, 7, 5, 2, 4, 9, 8, 6, 0, 3,           2, 6, 4, 0, 5, 1, 4, 2, 5, 6, 9, 2,           1, 9, 3, 1, 0, 7, 0, 8, 5, 8, 0, 8,           5, 6, 5, 4, 4, 2, 1, 6, 5, 5, 4, 7,           0, 3, 6, 2, 0, 8, 8, 6, 3, 1, 7, 0,           5, 4, 7, 7, 0, 9, 1, 5, 4, 4, 1, 9,           3, 7, 9, 9, 3, 2, 8, 5, 4, 9, 2, 2,           0, 5, 1, 8, 3, 6, 7, 2, 7, 7, 0, 3,           5, 2, 6, 8, 4, 6, 2, 7, 0, 1, 5, 3,           2, 0, 3, 2, 6, 9, 2, 5, 8, 3, 6, 3,           2, 0, 3, 2, 6, 9, 2, 5, 8, 3, 6, 3,           2, 0, 3, 2, 6, 9, 2, 5, 8, 3, 6, 3,           2, 0, 3, 2, 6, 9, 2, 5, 8, 3, 6, 3,           3, 4, 9, 8, 1, 2, 4, 9, 6, 3, 3, 2,           7, 2, 8, 2, 1, 0, 5, 1, 7, 1, 2, 7,           1, 5, 4, 2, 5, 4, 3, 0, 2, 9, 3, 9,           5, 9, 4, 4, 1, 5, 1, 7, 5, 6, 3, 2,           2, 8, 1, 8, 7, 0, 6, 7, 3, 4, 7, 4,           1, 2, 9, 8, 8, 1, 7, 2, 2, 8, 3, 9,           9, 8, 8, 4, 8, 4, 6, 4, 1, 7, 3, 8,           4, 3, 1, 6, 7, 0, 2, 4, 7, 9, 0, 0, 0,           4, 3, 1, 6, 7, 0, 2, 4, 7, 9, 0, 0, 0,           4, 0, 2, 4, 0, 7, 8, 0, 5, 9, 2, 9,           5, 3, 3, 3, 5, 0, 9, 8, 7, 5, 9, 5,           0
~	int arr[] = {2, 2, 6, 2, 6, 9, 8, 0, 5, 7, 5, 2, 0, 3, 3, 5, 1, 0, 6, 0, 0, 0, 4, 3, 8, 1, 0, 7, 7, 9, 8, 7, 8, 5, 5, 2, 4, 4, 6, 1, 2, 8, 5, 8, 1, 6, 3, 0, 6, 8, 7, 4, 0, 2, 2, 5, 6, 7, 3, 3, 2, 5, 7, 0, 2, 2, 9, 8, 5, 8, 2, 7, 2, 2, 6, 1, 0, 4, 2, 2, 7, 6, 8, 5, 5, 7, 7, 7, 7, 0, 0, 6, 6, 6, 6, 2, 7, 0, 9, 8, 7, 2, 9, 3, 0, 0, 4, 6, 2, 5, 1, 3, 1, 7, 2, 0, 9, 8, 4, 8, 5, 3, 7, 8, 8, 7, 1, 5, 4, 1, 5, 1, 1, 5, 8, 4, 2, 2, 6, 0, 7, 8, 6, 7, 9, 9, 0, 5, 6, 1, 4, 9, 9, 0, 3, 2, 6, 5, 6, 1, 7, 8, 8, 9, 0, 0,	4, 6, 1, 2, 8, 5, 8, 1, 6, 3, 0, 6, 8, 7, 4, 0, 2, 2, 5, 6, 7, 3, 3, 2, 5, 7, 0, 2, 2, 9, 8, 5, 8, 2, 7, 2, 2, 6, 1, 0, 4, 2, 2, 7, 6, 8, 5, 5, 7, 7, 7, 7, 0, 0, 6, 6, 6, 2, 7, 0, 9, 8, 7, 2, 9, 3, 0, 0, 4, 6, 2, 5, 1, 3, 1, 7, 2, 0, 9, 8, 4, 8, 5, 3, 7, 8, 8, 7, 1, 5, 4, 1, 5, 1, 1, 5, 8, 4, 2, 2, 6, 0, 7, 8, 6, 7, 9, 9,	7, 1, 8]  [2, 2, 6, 2, 6, 9, 8, 0, 5, 7, 5, 2, 0, 3, 3, 5, 1, 0, 6, 0, 0, 4, 3, 8, 1, 0, 7, 7, 9, 8, 7, 8, 5, 5, 2, 4, 4, 6, 1, 2, 8, 5, 8, 1, 6, 3, 0, 6, 8, 7, 4, 0, 2, 2, 5, 6, 7, 3, 3, 2, 5, 7, 0, 2, 2, 9, 8, 5, 8, 2, 7, 2, 2, 6, 1, 0, 4, 2, 2, 7, 6, 8, 5, 5, 7, 7, 7, 7, 0, 0, 6, 6, 6, 2, 7, 0, 9, 8, 7, 2, 9, 3, 0, 0, 4, 6, 2, 5, 1, 3, 1, 7, 2, 0, 9, 8, 4, 8, 5, 3, 7, 8, 8, 7, 1, 5, 4, 1, 5, 1, 1, 5, 8, 4, 2, 2, 6, 0, 7, 8, 6, 7, 9, 9, 0, 5, 6, 1, 4, 9, 9, 0, 3, 2, 6, 5,

Test	Expected	Got
8, 1, 3, 4, 5, 5, 1, 7, 3, 3, 4, 5, 8,	2, 7, 7, 9, 1, 4, 4, 0, 4, 7, 8, 1,	2, 7, 7, 9, 1, 4, 4, 0, 4, 7, 8, 1,
5, 8, 3, 5, 8, 2, 6, 1, 2, 1, 9, 4, 0,	3, 4, 5, 5, 1, 7, 3, 3, 4, 5, 8, 5,	3, 4, 5, 5, 1, 7, 3, 3, 4, 5, 8, 5,
7, 4, 7, 0, 1, 5, 6, 8, 8, 3, 1, 7, 4,	8, 3, 5, 8, 2, 6, 1, 2, 1, 9, 4, 0,	8, 3, 5, 8, 2, 6, 1, 2, 1, 9, 4, 0,
0, 9, 6, 2, 9, 6, 9, 6, 7, 6, 0, 1, 7,	7, 4, 7, 0, 1, 5, 6, 8, 8, 3, 1, 7,	7, 4, 7, 0, 1, 5, 6, 8, 8, 3, 1, 7,
6, 7, 4, 7, 9, 1, 0, 4, 7, 3, 0, 6, 5,	4, 0, 9, 6, 2, 9, 6, 9, 6, 7, 6, 0,	4, 0, 9, 6, 2, 9, 6, 9, 6, 7, 6, 0,
2, 6, 7, 4, 8, 4, 3, 7, 3, 2, 0, 1, 9,	1, 7, 6, 7, 4, 7, 9, 1, 0, 4, 7, 3,	1, 7, 6, 7, 4, 7, 9, 1, 0, 4, 7, 3,
7, 8, 8, 8, 3, 8, 7, 5, 0, 4, 0, 5, 2,	0, 6, 5, 2, 6, 7, 4, 8, 4, 3, 7, 3,	0, 6, 5, 2, 6, 7, 4, 8, 4, 3, 7, 3,
6, 2, 4, 2, 9, 8, 7, 0, 2, 9, 4, 0, 7,	2, 0, 1, 9, 7, 8, 8, 8, 3, 8, 7, 5,	2, 0, 1, 9, 7, 8, 8, 8, 3, 8, 7, 5,
4, 8, 3, 2, 1, 0, 8, 1, 2, 2, 0, 2, 1,	0, 4, 0, 5, 2, 6, 2, 4, 2, 9, 8, 7,	0, 4, 0, 5, 2, 6, 2, 4, 2, 9, 8, 7,
1, 3, 9, 4, 2, 4, 6, 3, 0, 1, 0, 1, 9,	0, 2, 9, 4, 0, 7, 4, 8, 3, 2, 1, 0,	0, 2, 9, 4, 0, 7, 4, 8, 3, 2, 1, 0,
3, 0, 8, 6, 5, 7, 9, 3, 2, 0, 8, 0, 6,	8, 1, 2, 2, 0, 2, 1, 1, 3, 9, 4, 2,	8, 1, 2, 2, 0, 2, 1, 1, 3, 9, 4, 2,
8, 0, 5, 1, 7, 6, 9, 8, 0, 7, 1, 6, 6,	4, 6, 3, 0, 1, 0, 1, 9, 3, 0, 8, 6,	4, 6, 3, 0, 1, 0, 1, 9, 3, 0, 8, 6,
3, 1, 2, 3, 1, 5, 6, 2, 9, 3, 2, 3, 0,	5, 7, 9, 3, 2, 0, 8, 0, 6, 8, 0, 5,	5, 7, 9, 3, 2, 0, 8, 0, 6, 8, 0, 5,
5, 5, 1, 6, 3, 6, 2, 4, 7, 6, 5, 7, 4,	1, 7, 6, 9, 8, 0, 7, 1, 6, 6, 3, 1,	1, 7, 6, 9, 8, 0, 7, 1, 6, 6, 3, 1,
5, 1, 9, 8, 6, 2, 0, 1, 9, 3, 6, 5, 0,	2, 3, 1, 5, 6, 2, 9, 3, 2, 3, 0, 5,	2, 3, 1, 5, 6, 2, 9, 3, 2, 3, 0, 5,
3, 4, 5, 6, 2, 5, 6, 9, 9, 0, 3, 7, 0,	5, 1, 6, 3, 6, 2, 4, 7, 6, 5, 7, 4,	5, 1, 6, 3, 6, 2, 4, 7, 6, 5, 7, 4,
8, 8, 0, 3, 0, 4, 2, 7, 0, 9, 0, 6, 3,	5, 1, 9, 8, 6, 2, 0, 1, 9, 3, 6, 5,	5, 1, 9, 8, 6, 2, 0, 1, 9, 3, 6, 5,
9, 9, 5, 8, 9, 6, 2, 3, 0, 7, 1, 8, 9,	0, 3, 4, 5, 6, 2, 5, 6, 9, 9, 0, 3,	0, 3, 4, 5, 6, 2, 5, 6, 9, 9, 0, 3,
7, 5, 2, 4, 0, 0, 8, 4, 4, 4, 9, 9, 4,	7, 0, 8, 8, 0, 3, 0, 4, 2, 7, 0, 9,	7, 0, 8, 8, 0, 3, 0, 4, 2, 7, 0, 9,
7, 6, 1, 9, 1, 0, 9, 8, 0, 6, 4, 4, 0,	0, 6, 3, 9, 9, 5, 8, 9, 6, 2, 3, 0,	0, 6, 3, 9, 9, 5, 8, 9, 6, 2, 3, 0,
6, 1, 8, 6, 3, 0, 2, 6, 6, 3, 0, 3, 3,	7, 1, 8, 9, 7, 5, 2, 4, 0, 0, 8, 4,	7, 1, 8, 9, 7, 5, 2, 4, 0, 0, 8, 4,
2, 1, 1, 5, 8, 0, 0, 0, 2, 3, 2, 0, 1,	4, 4, 9, 9, 4, 7, 6, 1, 9, 1, 0, 9,	4, 4, 9, 9, 4, 7, 6, 1, 9, 1, 0, 9,
3, 3, 6, 4, 9, 9, 7, 0, 5, 4, 5, 5, 9,	8, 0, 6, 4, 4, 0, 6, 1, 8, 6, 3, 0,	8, 0, 6, 4, 4, 0, 6, 1, 8, 6, 3, 0,
4, 5, 5, 3, 4, 2, 7, 8, 3, 6, 7, 0, 2,	2, 6, 6, 3, 0, 3, 3, 2, 1, 1, 5, 8,	2, 6, 6, 3, 0, 3, 3, 2, 1, 1, 5, 8,
4, 7, 0, 6, 9, 9, 1, 8, 3, 4, 0, 7, 6,	0, 0, 0, 2, 3, 2, 0, 1, 3, 3, 6, 4,	0, 0, 0, 2, 3, 2, 0, 1, 3, 3, 6, 4,
5, 2, 8, 0, 7, 7, 7, 7, 2, 4, 9, 3, 3,	9, 9, 7, 0, 5, 4, 5, 5, 9, 4, 5, 5,	9, 9, 7, 0, 5, 4, 5, 5, 9, 4, 5, 5,
5, 0, 1, 2, 8, 7, 1, 0, 3, 5, 0, 4, 6,	3, 4, 2, 7, 8, 3, 6, 7, 0, 2, 4, 7,	3, 4, 2, 7, 8, 3, 6, 7, 0, 2, 4, 7,
5, 2, 0, 0, 5, 7, 0, 4, 6, 4, 2, 9, 4,	0, 6, 9, 9, 1, 8, 3, 4, 0, 7, 6, 5,	0, 6, 9, 9, 1, 8, 3, 4, 0, 7, 6, 5,
8, 6, 7, 1, 3, 2, 1, 4, 8, 8, 1, 1, 6,	2, 8, 0, 7, 7, 7, 7, 2, 4, 9, 3, 3,	2, 8, 0, 7, 7, 7, 7, 2, 4, 9, 3, 3,
1, 6, 3, 0, 9, 2, 5, 1, 8, 8, 2, 9, 4,	5, 0, 1, 2, 8, 7, 1, 0, 3, 5, 0, 4,	5, 0, 1, 2, 8, 7, 1, 0, 3, 5, 0, 4,
0, 0, 1, 8, 4, 0, 4, 2, 6, 0, 2, 8, 0,	6, 5, 2, 0, 0, 5, 7, 0, 4, 6, 4, 2,	6, 5, 2, 0, 0, 5, 7, 0, 4, 6, 4, 2,
2, 8, 4, 5, 6, 1, 5, 8, 7, 3, 8, 0, 9,	9, 4, 8, 6, 7, 1, 3, 2, 1, 4, 8, 8,	9, 4, 8, 6, 7, 1, 3, 2, 1, 4, 8, 8,
9, 3, 5, 4, 8, 2, 6, 1, 7, 8, 1, 8, 0, 2, 4, 3, 6, 4, 3, 5, 7, 7, 5, 8, 0, 8,	1, 1, 6, 1, 6, 3, 0, 9, 2, 5, 1, 8,	1, 1, 6, 1, 6, 3, 0, 9, 2, 5, 1, 8,
	8, 2, 9, 4, 0, 0, 1, 8, 4, 0, 4, 2,	8, 2, 9, 4, 0, 0, 1, 8, 4, 0, 4, 2,
4, 6, 0, 5, 4, 9, 1, 3, 8, 8, 2, 6, 4,	6, 0, 2, 8, 0, 2, 8, 4, 5, 6, 1, 5,	6, 0, 2, 8, 0, 2, 8, 4, 5, 6, 1, 5,
0, 0, 1, 0, 8, 6, 0, 0, 9, 3, 3, 2, 1, 3, 4, 0, 7, 1, 0, 2, 3, 1, 2, 3, 4, 6,	8, 7, 3, 8, 0, 9, 9, 3, 5, 4, 8, 2, 6, 1, 7, 8, 1, 8, 0, 2, 4, 3, 6, 4,	8, 7, 3, 8, 0, 9, 9, 3, 5, 4, 8, 2, 6, 1, 7, 8, 1, 8, 0, 2, 4, 3, 6, 4,
1, 5, 7, 3, 6, 3, 2, 2, 4, 4, 0, 8, 1,	3, 5, 7, 7, 5, 8, 0, 8, 4, 6, 0, 5,	3, 5, 7, 7, 5, 8, 0, 8, 4, 6, 0, 5,
6, 8, 1, 4, 2, 9, 6, 2, 7, 9, 6, 8, 0,	4, 9, 1, 3, 8, 8, 2, 6, 4, 0, 0, 1,	4, 9, 1, 3, 8, 8, 2, 6, 4, 0, 0, 1,
2, 7, 6, 8, 3, 9, 1, 1, 3, 3, 0, 3, 4,	0, 8, 6, 0, 0, 9, 3, 3, 2, 1, 3, 4,	0, 8, 6, 0, 0, 9, 3, 3, 2, 1, 3, 4, 0, 7, 1, 0, 2, 3, 1, 2, 3, 4, 6, 1,
9, 3, 4, 2, 7, 7, 2, 5, 1, 4, 8, 0, 4,	0, 7, 1, 0, 2, 3, 1, 2, 3, 4, 6, 1,	
0, 7, 2, 8, 8, 7, 1, 4, 8, 6, 6, 6, 3,	5, 7, 3, 6, 3, 2, 2, 4, 4, 0, 8, 1,	5, 7, 3, 6, 3, 2, 2, 4, 4, 0, 8, 1, 6, 8, 1, 4, 2, 9, 6, 2, 7, 9, 6, 8,
2, 1, 9, 5, 9, 6, 7, 4, 1, 6, 3, 6, 3,	6, 8, 1, 4, 2, 9, 6, 2, 7, 9, 6, 8, 0, 2, 7, 6, 8, 3, 9, 1, 1, 3, 3, 0,	0, 2, 7, 6, 8, 3, 9, 1, 1, 3, 3, 0,
8, 3, 6, 0, 0, 2, 7, 3, 9, 4, 2, 1, 6,		
4, 6, 8, 9, 6, 0, 4, 2, 0, 8, 2, 8, 8,	3, 4, 9, 3, 4, 2, 7, 7, 2, 5, 1, 4, 8 0 4 0 7 2 8 8 7 1 4 8	3, 4, 9, 3, 4, 2, 7, 7, 2, 5, 1, 4, 8 0 4 0 7 2 8 8 7 1 4 8
7, 0, 4, 4, 9, 3, 4, 2, 9, 1, 0, 1, 0,	8, 0, 4, 0, 7, 2, 8, 8, 7, 1, 4, 8,	8, 0, 4, 0, 7, 2, 8, 8, 7, 1, 4, 8,
4, 5, 6, 7, 7, 1, 5, 4, 1, 3, 7, 8, 0,	6, 6, 6, 3, 2, 1, 9, 5, 9, 6, 7, 4,	6, 6, 6, 3, 2, 1, 9, 5, 9, 6, 7, 4,
8, 8, 6, 1, 1, 1, 0, 6, 8, 8, 4, 1, 8,	1, 6, 3, 6, 3, 8, 3, 6, 0, 0, 2, 7,	1, 6, 3, 6, 3, 8, 3, 6, 0, 0, 2, 7,
0, 4, 1, 2, 1, 1, 6, 3, 5, 8, 2, 0, 5,	3, 9, 4, 2, 1, 6, 4, 6, 8, 9, 6, 0,	3, 9, 4, 2, 1, 6, 4, 6, 8, 9, 6, 0,
6, 8, 5, 9, 5, 1, 0, 0, 6, 7, 6, 0, 0,	4, 2, 0, 8, 2, 8, 8, 7, 0, 4, 4, 9,	4, 2, 0, 8, 2, 8, 8, 7, 0, 4, 4, 9,
0, 4, 9, 6, 0, 4, 8, 2, 9, 1, 3, 8, 2,	3, 4, 2, 9, 1, 0, 1, 0, 4, 5, 6, 7,	3, 4, 2, 9, 1, 0, 1, 0, 4, 5, 6, 7,
5, 5, 3, 9, 1, 6, 1, 8, 8, 4, 8, 8, 0,	7, 1, 5, 4, 1, 3, 7, 8, 0, 8, 8, 6,	7, 1, 5, 4, 1, 3, 7, 8, 0, 8, 8, 6,
8, 9, 9, 3, 7, 7, 6, 0, 8, 1, 9, 1, 0,	1, 1, 1, 0, 6, 8, 8, 4, 1, 8, 0, 4,	1, 1, 1, 0, 6, 8, 8, 4, 1, 8, 0, 4,
3, 5, 4, 9, 1, 5, 6, 8, 6, 3, 4, 6, 3,	1, 2, 1, 1, 6, 3, 5, 8, 2, 0, 5, 6,	1, 2, 1, 1, 6, 3, 5, 8, 2, 0, 5, 6,
3, 3, 8, 1, 6, 5, 0, 8, 4, 1, 6, 9, 1,	8, 5, 9, 5, 1, 0, 0, 6, 7, 6, 0, 0,	8, 5, 9, 5, 1, 0, 0, 6, 7, 6, 0, 0,
8, 0, 5, 5, 8, 6, 1, 8, 7, 7, 9, 6, 8,	0, 4, 9, 6, 0, 4, 8, 2, 9, 1, 3, 8,	0, 4, 9, 6, 0, 4, 8, 2, 9, 1, 3, 8,
4 7 5 5 0 0 0 0 1 1 1 1 1	2, 5, 5, 3, 9, 1, 6, 1, 8, 8, 4, 8,	2, 5, 5, 3, 9, 1, 6, 1, 8, 8, 4, 8,
	8, 0, 8, 9, 9, 3, 7, 7, 6, 0, 8, 1,	8, 0, 8, 9, 9, 3, 7, 7, 6, 0, 8, 1,
8, 9, 7, 7, 6, 5, 8, 3, 3, 9, 3, 9, 5,		9, 1, 0, 3, 5, 4, 9, 1, 5, 6, 8, 6,
4, 7, 5, 5, 0, 8, 8, 2, 1, 6, 3, 0, 2, 8, 9, 7, 7, 6, 5, 8, 3, 3, 9, 3, 9, 5, 1, 7, 1, 1, 8, 1, 7, 8, 6, 1, 0, 3, 4,	9, 1, 0, 3, 5, 4, 9, 1, 5, 6, 8, 6,	
8, 9, 7, 7, 6, 5, 8, 3, 3, 9, 3, 9, 5, 1, 7, 1, 1, 8, 1, 7, 8, 6, 1, 0, 3, 4, 1, 7, 0, 4, 1, 6, 2, 2, 1, 7, 7, 0, 0,	9, 1, 0, 3, 5, 4, 9, 1, 5, 6, 8, 6, 3, 4, 6, 3, 3, 3, 8, 1, 6, 5, 0, 8,	3, 4, 6, 3, 3, 3, 8, 1, 6, 5, 0, 8,
8, 9, 7, 7, 6, 5, 8, 3, 3, 9, 3, 9, 5, 1, 7, 1, 1, 8, 1, 7, 8, 6, 1, 0, 3, 4, 1, 7, 0, 4, 1, 6, 2, 2, 1, 7, 7, 0, 0, 2, 5, 4, 9, 8, 1, 3, 1, 1, 3, 2, 7, 8,	9, 1, 0, 3, 5, 4, 9, 1, 5, 6, 8, 6, 3, 4, 6, 3, 3, 3, 8, 1, 6, 5, 0, 8, 4, 1, 6, 9, 1, 8, 0, 5, 5, 8, 6, 1,	3, 4, 6, 3, 3, 3, 8, 1, 6, 5, 0, 8, 4, 1, 6, 9, 1, 8, 0, 5, 5, 8, 6, 1,
8, 9, 7, 7, 6, 5, 8, 3, 3, 9, 3, 9, 5, 1, 7, 1, 1, 8, 1, 7, 8, 6, 1, 0, 3, 4, 1, 7, 0, 4, 1, 6, 2, 2, 1, 7, 7, 0, 0, 2, 5, 4, 9, 8, 1, 3, 1, 1, 3, 2, 7, 8, 0, 9, 3, 4, 3, 2, 9, 8, 7, 2, 5, 4, 0,	9, 1, 0, 3, 5, 4, 9, 1, 5, 6, 8, 6, 3, 4, 6, 3, 3, 3, 8, 1, 6, 5, 0, 8, 4, 1, 6, 9, 1, 8, 0, 5, 5, 8, 6, 1, 8, 7, 7, 9, 6, 8, 4, 7, 5, 5, 0, 8,	3, 4, 6, 3, 3, 3, 8, 1, 6, 5, 0, 8, 4, 1, 6, 9, 1, 8, 0, 5, 5, 8, 6, 1, 8, 7, 7, 9, 6, 8, 4, 7, 5, 5, 0, 8,
8, 9, 7, 7, 6, 5, 8, 3, 3, 9, 3, 9, 5, 1, 7, 1, 1, 8, 1, 7, 8, 6, 1, 0, 3, 4, 1, 7, 0, 4, 1, 6, 2, 2, 1, 7, 7, 0, 0, 2, 5, 4, 9, 8, 1, 3, 1, 1, 3, 2, 7, 8, 0, 9, 3, 4, 3, 2, 9, 8, 7, 2, 5, 4, 0, 4, 8, 5, 3, 9, 3, 9, 6, 2, 7, 1, 7, 7,	9, 1, 0, 3, 5, 4, 9, 1, 5, 6, 8, 6, 3, 4, 6, 3, 3, 3, 8, 1, 6, 5, 0, 8, 4, 1, 6, 9, 1, 8, 0, 5, 5, 8, 6, 1, 8, 7, 7, 9, 6, 8, 4, 7, 5, 5, 0, 8, 8, 2, 1, 6, 3, 0, 2, 8, 9, 7, 7, 6,	3, 4, 6, 3, 3, 3, 8, 1, 6, 5, 0, 8, 4, 1, 6, 9, 1, 8, 0, 5, 5, 8, 6, 1, 8, 7, 7, 9, 6, 8, 4, 7, 5, 5, 0, 8, 8, 2, 1, 6, 3, 0, 2, 8, 9, 7, 7, 6,
8, 9, 7, 7, 6, 5, 8, 3, 3, 9, 3, 9, 5, 1, 7, 1, 1, 8, 1, 7, 8, 6, 1, 0, 3, 4, 1, 7, 0, 4, 1, 6, 2, 2, 1, 7, 7, 0, 0,	9, 1, 0, 3, 5, 4, 9, 1, 5, 6, 8, 6, 3, 4, 6, 3, 3, 3, 8, 1, 6, 5, 0, 8, 4, 1, 6, 9, 1, 8, 0, 5, 5, 8, 6, 1, 8, 7, 7, 9, 6, 8, 4, 7, 5, 5, 0, 8,	3, 4, 6, 3, 3, 3, 8, 1, 6, 5, 0, 8, 4, 1, 6, 9, 1, 8, 0, 5, 5, 8, 6, 1, 8, 7, 7, 9, 6, 8, 4, 7, 5, 5, 0, 8,

Test	Expected	Got
6, 2, 7, 3, 0, 1, 3, 8, 7, 0, 9, 7, 4,	4, 1, 6, 2, 2, 1, 7, 7, 0, 0, 2, 5,	4, 1, 6, 2, 2, 1, 7, 7, 0, 0, 2, 5,
4, 4, 6, 0, 8, 2, 6, 9, 9, 5, 3, 7, 9,	4, 9, 8, 1, 3, 1, 1, 3, 2, 7, 8, 0,	4, 9, 8, 1, 3, 1, 1, 3, 2, 7, 8, 0,
4, 8, 8, 6, 1, 7, 9, 4, 8, 0, 0, 2, 5,	9, 3, 4, 3, 2, 9, 8, 7, 2, 5, 4, 0,	9, 3, 4, 3, 2, 9, 8, 7, 2, 5, 4, 0,
8, 6, 3, 3, 1, 2, 5, 5, 2, 9, 4, 8, 8,	4, 8, 5, 3, 9, 3, 9, 6, 2, 7, 1, 7,	4, 8, 5, 3, 9, 3, 9, 6, 2, 7, 1, 7,
6, 9, 1, 3, 9, 5, 3, 0, 7, 2, 1, 2, 4,	7, 5, 6, 1, 7, 7, 7, 8, 4, 6, 0, 2,	7, 5, 6, 1, 7, 7, 7, 8, 4, 6, 0, 2,
4, 6, 0, 2, 8, 7, 1, 6, 7, 4, 5, 1, 9,	3, 5, 8, 0, 1, 4, 9, 6, 1, 7, 5, 3,	3, 5, 8, 0, 1, 4, 9, 6, 1, 7, 5, 3,
4, 4, 7, 0, 3, 6, 0, 0, 7, 8, 0, 4, 5,	3, 8, 2, 6, 2, 7, 3, 0, 1, 3, 8, 7,	3, 8, 2, 6, 2, 7, 3, 0, 1, 3, 8, 7,
7, 7, 6, 5, 0, 3, 1, 0, 7, 0, 5, 0, 3,	0, 9, 7, 4, 4, 4, 6, 0, 8, 2, 6, 9,	0, 9, 7, 4, 4, 4, 6, 0, 8, 2, 6, 9,
1, 2, 1, 9, 3, 4, 4, 0, 0, 2, 9, 6, 3,	9, 5, 3, 7, 9, 4, 8, 8, 6, 1, 7, 9,	9, 5, 3, 7, 9, 4, 8, 8, 6, 1, 7, 9,
8, 9, 6, 7, 6, 9, 5, 3, 2, 1, 3, 0, 2,	4, 8, 0, 0, 2, 5, 8, 6, 3, 3, 1, 2,	4, 8, 0, 0, 2, 5, 8, 6, 3, 3, 1, 2,
7, 9, 8, 8, 5, 4, 4, 2, 6, 5, 4, 2, 0,	5, 5, 2, 9, 4, 8, 8, 6, 9, 1, 3, 9,	5, 5, 2, 9, 4, 8, 8, 6, 9, 1, 3, 9,
0, 2, 7, 8, 8, 7, 9, 7, 9, 8, 8, 2, 6,	5, 3, 0, 7, 2, 1, 2, 4, 4, 6, 0, 2,	5, 3, 0, 7, 2, 1, 2, 4, 4, 6, 0, 2,
0, 9, 0, 2, 6, 1, 9, 2, 9, 2, 5, 8, 6,	8, 7, 1, 6, 7, 4, 5, 1, 9, 4, 4, 7,	8, 7, 1, 6, 7, 4, 5, 1, 9, 4, 4, 7,
8, 0, 1, 5, 0, 6, 9, 7, 7, 2, 1, 5, 6,	0, 3, 6, 0, 0, 7, 8, 0, 4, 5, 7, 7,	0, 3, 6, 0, 0, 7, 8, 0, 4, 5, 7, 7,
1, 7, 0, 0, 7, 0, 0, 2, 8, 3, 3, 2, 9,	6, 5, 0, 3, 1, 0, 7, 0, 5, 0, 3, 1,	6, 5, 0, 3, 1, 0, 7, 0, 5, 0, 3, 1,
8, 9, 8, 9, 9, 1, 7, 6, 2, 5, 1, 2, 5,	2, 1, 9, 3, 4, 4, 0, 0, 2, 9, 6, 3,	2, 1, 9, 3, 4, 4, 0, 0, 2, 9, 6, 3,
7, 0, 8, 2, 8, 7, 7, 6, 1, 2, 8, 2, 5,	8, 9, 6, 7, 6, 9, 5, 3, 2, 1, 3, 0,	8, 9, 6, 7, 6, 9, 5, 3, 2, 1, 3, 0,
8, 0, 5, 7, 0, 7, 0, 2, 5, 5, 0, 3, 1,		
	2, 7, 9, 8, 8, 5, 4, 4, 2, 6, 5, 4,	2, 7, 9, 8, 8, 5, 4, 4, 2, 6, 5, 4,
8, 5, 7, 6, 8, 0, 0, 5, 1, 9, 0, 1, 3,	2, 0, 0, 2, 7, 8, 8, 7, 9, 7, 9, 8,	2, 0, 0, 2, 7, 8, 8, 7, 9, 7, 9, 8,
3, 3, 5, 5, 0, 6, 8, 5, 4, 7, 7, 8, 0,	8, 2, 6, 0, 9, 0, 2, 6, 1, 9, 2, 9,	8, 2, 6, 0, 9, 0, 2, 6, 1, 9, 2, 9,
3, 5, 9, 2, 8, 7, 8, 4, 5, 7, 6, 4, 9,	2, 5, 8, 6, 8, 0, 1, 5, 0, 6, 9, 7,	2, 5, 8, 6, 8, 0, 1, 5, 0, 6, 9, 7,
7, 6, 1, 1, 1, 6, 0, 1, 0, 7, 5, 1, 9,	7, 2, 1, 5, 6, 1, 7, 0, 0, 7, 0, 0,	7, 2, 1, 5, 6, 1, 7, 0, 0, 7, 0, 0,
9, 2, 7, 4, 9, 9,snip 2, 6, 9,	2, 8, 3, 3, 2, 9, 8, 9, 8, 9, 9, 1,	2, 8, 3, 3, 2, 9, 8, 9, 8, 9, 9, 1,
2, 8, 3, 8, 0, 6, 8, 3, 5, 0, 9, 6, 0,	7, 6, 2, 5, 1, 2, 5, 7, 0, 8, 2, 8,	7, 6, 2, 5, 1, 2, 5, 7, 0, 8, 2, 8,
7, 2, 5, 0, 3, 2, 8, 8, 2, 5, 5, 3, 6,	7, 7, 6, 1, 2, 8, 2, 5, 8, 0, 5, 7,	7, 7, 6, 1, 2, 8, 2, 5, 8, 0, 5, 7,
9, 4, 9, 2, 2, 9, 6, 6, 7, 5, 7, 4, 6,	0, 7, 0, 2, 5, 5, 0, 3, 1, 8, 5, 7,	0, 7, 0, 2, 5, 5, 0, 3, 1, 8, 5, 7,
9, 8, 9, 7, 9, 2, 7, 0, 4, 9, 0, 6, 2,	6, 8, 0, 0, 5, 1, 9, 0, 1, 3, 3, 3,	6, 8, 0, 0, 5, 1, 9, 0, 1, 3, 3, 3,
8, 1, 3, 0, 3, 4, 7, 0, 7, 2, 1, 7, 4,	5, 5, 0, 6, 8, 5, 4, 7, 7, 8, 0, 3,	5, 5, 0, 6, 8, 5, 4, 7, 7, 8, 0, 3,
2, 0, 6, 5, 6, 3, 6, 6, 9, 1, 3, 0, 8,	5, 9, 2, 8, 7, 8, 4, 5, 7, 6, 4, 9,	5, 9, 2, 8, 7, 8, 4, 5, 7, 6, 4, 9,
4, 9, 7, 1, 6, 8, 4, 9, 8, 3, 4, 0, 2,	7, 6, 1, 1, 1, 6, 0, 1, 0, 7, 5, 1,	7, 6, 1, 1, 1, 6, 0, 1, 0, 7, 5, 1,
2, 4, 6, 2, 7, 9, 0, 3, 8, 0, 6, 0, 6,	9, 9, 2, 7, 4, 9, 9, 0, 6, 3, 1,	9, 9, 2, 7, 4, 9, 9, 0, 6, 3, 1,
7, 7, 9, 6, 0, 4, 7, 8, 4, 4, 2, 7, 0,	snip 2, 7, 3, 3, 1, 3, 7, 2,	snip 2, 7, 3, 3, 1, 3, 7, 2,
0, 8, 0, 8, 8, 5, 7, 6, 2, 8, 5, 5, 3,	1, 8, 4, 2, 6, 7, 2, 5, 3, 8, 6, 8,	1, 8, 4, 2, 6, 7, 2, 5, 3, 8, 6, 8,
7, 1, 2, 8, 8, 4, 1, 8, 1, 8, 7, 8, 4,	4, 0, 7, 5, 6, 1, 4, 5, 2, 6, 5, 2,	4, 0, 7, 5, 6, 1, 4, 5, 2, 6, 5, 2,
0, 1, 6, 3, 0, 2, 3, 6, 0, 8, 2, 0, 7,	9, 1, 5, 1, 3, 8, 9, 0, 7, 7, 4, 9,	9, 1, 5, 1, 3, 8, 9, 0, 7, 7, 4, 9,
8, 7, 1, 3, 3, 5, 0, 0, 1, 5, 2, 7, 5,	4, 4, 7, 0, 0, 9, 0, 7, 9, 5, 4, 8,	4, 4, 7, 0, 0, 9, 0, 7, 9, 5, 4, 8,
2, 5, 1, 6, 4, 9, 9, 7, 2, 1, 3, 3, 3,	5, 9, 1, 8, 8, 9, 7, 1, 6, 2, 8, 9,	5, 9, 1, 8, 8, 9, 7, 1, 6, 2, 8, 9,
2, 2, 5, 9, 0, 7, 0, 0, 1, 0, 6, 2, 1,	0, 4, 1, 8, 1, 3, 3, 1, 6, 4, 7, 0,	0, 4, 1, 8, 1, 3, 3, 1, 6, 4, 7, 0,
1, 9, 4, 3, 3, 4, 9, 9, 5, 7, 2, 3, 7,	0, 3, 2, 5, 9, 0, 5, 9, 7, 1, 1, 9,	0, 3, 2, 5, 9, 0, 5, 9, 7, 1, 1, 9,
8, 4, 2, 4, 0, 0, 7, 5, 7, 1, 9, 5, 7,	6, 3, 4, 3, 6, 7, 4, 4, 7, 4, 7, 8,	6, 3, 4, 3, 6, 7, 4, 4, 7, 4, 7, 8,
7, 6, 0, 6, 7, 8, 5, 9, 9, 4, 9, 2, 6,	6, 5, 5, 1, 5, 9, 8, 4, 6, 9, 6, 8,	6, 5, 5, 1, 5, 9, 8, 4, 6, 9, 6, 8,
8, 4, 1, 1, 8, 1, 0, 2, 4, 6, 3, 0, 8,	5, 0, 8, 2, 9, 1, 3, 7, 9, 5, 2, 1,	5, 0, 8, 2, 9, 1, 3, 7, 9, 5, 2, 1,
9, 1, 6, 6, 2, 3, 6, 6, 3, 9, 8, 7, 5,	8, 0, 5, 9, 4, 9, 5, 6, 3, 2, 8, 2,	8, 0, 5, 9, 4, 9, 5, 6, 3, 2, 8, 2,
5, 8, 3, 8, 4, 1, 6, 6, 6, 3, 5, 4, 3,	8, 5, 8, 8, 7, 1, 4, 4, 6, 2, 6, 1,	8, 5, 8, 8, 7, 1, 4, 4, 6, 2, 6, 1,
6, 2, 3, 5, 3, 4, 1, 3, 1, 0, 1, 9, 7,	7, 0, 4, 9, 9, 6, 3, 1, 3, 3, 3, 5,	7, 0, 4, 9, 9, 6, 3, 1, 3, 3, 3, 5,
8, 7, 2, 8, 5, 6, 5, 6, 3, 6, 4, 8, 0,	8, 7, 2, 5, 1, 3, 8, 2, 8, 1, 5, 2,	8, 7, 2, 5, 1, 3, 8, 2, 8, 1, 5, 2,
0, 6, 7, 2, 4, 5, 5, 2, 9, 6, 7, 0, 8,	0, 6, 6, 5, 5, 4, 5, 7, 9, 3, 5, 3,	0, 6, 6, 5, 5, 4, 5, 7, 9, 3, 5, 3,
7, 9, 1, 8, 9, 6, 7, 7, 8, 5, 5, 4, 3,	1, 6, 9, 0, 9, 5, 8, 8, 4, 6, 0, 9,	1, 6, 9, 0, 9, 5, 8, 8, 4, 6, 0, 9,
7, 1, 1, 6, 3, 0, 9, 7, 7, 8, 7, 1, 5,	4, 0, 8, 1, 2, 3, 9, 9, 6, 9, 2, 8,	4, 0, 8, 1, 2, 3, 9, 9, 6, 9, 2, 8,
8, 6, 0, 1, 4, 6, 1, 6, 4, 2, 1, 3, 0,	6, 5, 4, 9, 2, 4, 2, 3, 1, 8, 6, 8,	6, 5, 4, 9, 2, 4, 2, 3, 1, 8, 6, 8,
9, 5, 3, 2, 3, 5, 1, 6, 0, 4, 5, 0, 9,	3, 3, 5, 4, 7, 1, 1, 2, 7, 5, 8, 7,	3, 3, 5, 4, 7, 1, 1, 2, 7, 5, 8, 7,
5, 3, 2, 6, 4, 0, 4, 5, 1, 4, 7, 5, 1,	7, 2, 3, 5, 3, 4, 7, 2, 8, 5, 6, 9,	7, 2, 3, 5, 3, 4, 7, 2, 8, 5, 6, 9,
6, 9, 6, 6, 0, 3, 1, 6, 9, 9, 6, 5, 1,	7, 1, 4, 0, 0, 3, 6, 3, 0, 4, 4, 0,	7, 1, 4, 0, 0, 3, 6, 3, 0, 4, 4, 0,
3, 6, 4, 7, 3, 9, 6, 6, 8, 8, 2, 9, 1,	4, 3, 7, 1, 8, 5, 1, 3, 0, 9, 0, 2,	4, 3, 7, 1, 8, 5, 1, 3, 0, 9, 0, 2,
0, 8, 6, 7, 4, 1, 6, 1, 4, 7, 3, 5, 3,	2, 5, 3, 3, 8, 7, 9, 3, 9, 5, 9, 0,	2, 5, 3, 3, 8, 7, 9, 3, 9, 5, 9, 0,
1, 3, 8, 0, 1, 9, 7, 6, 4, 9, 8, 6, 0,	7, 7, 0, 2, 9, 8, 4, 0, 6, 0, 4, 2,	7, 7, 0, 2, 9, 8, 4, 0, 6, 0, 4, 2,
0, 3, 6, 0, 0, 3, 4, 7, 5, 5, 8, 5, 2,	3, 3, 4, 9, 7, 2, 8, 3, 1, 9, 2, 7,	3, 3, 4, 9, 7, 2, 8, 3, 1, 9, 2, 7,
4, 5, 2, 4, 5, 4, 8, 6, 9, 2, 4, 9, 7,	9, 8, 7, 5, 7, 1, 9, 3, 9, 4, 2, 9,	9, 8, 7, 5, 7, 1, 9, 3, 9, 4, 2, 9,
4, 6, 1, 3, 0, 8, 6, 1, 1, 2, 6, 8, 4,	1, 1, 0, 4, 6, 3, 8, 6, 9, 3, 9, 5,	1, 1, 0, 4, 6, 3, 8, 6, 9, 3, 9, 5,
9, 4, 3, 6, 5, 0, 3, 6, 4, 1, 8, 7, 7,	1, 8, 0, 6, 7, 6, 4, 7, 7, 6, 7, 4,	1, 8, 0, 6, 7, 6, 4, 7, 7, 6, 7, 4,
	3, 8, 4, 4, 3, 3, 6, 8, 3, 7, 4, 5,	3, 8, 4, 4, 3, 3, 6, 8, 3, 7, 4, 5,
	-, -, ., ., -, -, -, -, -, -, -, -,	
2, 3, 6, 2, 8, 4, 3, 1, 7, 8, 2, 4, 0, 7. 7. 4. 9. 8. 5. 8. 1. 0. 0. 9. 6. 3.	4. 7. 7. 5. 1. 6 8 2 8 A 8 A	4. /. /. 5. 1 6 x 7 x 4 x 4
7, 7, 4, 9, 8, 5, 8, 1, 0, 0, 9, 6, 3,	4, 7, 7, 5, 1, 6, 8, 2, 8, 0, 8, 0, 8, 8, 7, 3, 6, 5, 2, 4, 3, 9, 8, 7.	4, 7, 7, 5, 1, 6, 8, 2, 8, 0, 8, 0, 8, 8, 8, 7, 3, 6, 5, 2, 4, 3, 9, 8, 7,
	4, 7, 7, 5, 1, 6, 8, 2, 8, 0, 8, 0, 8, 8, 7, 3, 6, 5, 2, 4, 3, 9, 8, 7, 6, 3, 0, 4, 4, 6, 2, 3, 5, 6, 0, 9,	4, 7, 7, 5, 1, 6, 8, 2, 8, 0, 8, 0, 8, 8, 8, 7, 3, 6, 5, 2, 4, 3, 9, 8, 7, 6, 3, 0, 4, 4, 6, 2, 3, 5, 6, 0, 9,

Test	Expected	Got
5, 4, 8, 3, 2, 3, 5, 0, 1, 9, 0, 9, 2,	8, 0, 0, 1, 1, 2, 7, 8, 9, 7, 2, 3,	8, 0, 0, 1, 1, 2, 7, 8, 9, 7, 2, 3,
3, 5, 3, 0, 4, 0, 8, 3, 4, 2, 6, 4, 4,	2, 8, 9, 5, 1, 8, 9, 9, 5, 2, 2, 0,	2, 8, 9, 5, 1, 8, 9, 9, 5, 2, 2, 0,
6, 1, 4, 0, 6, 9, 7, 7, 7, 6, 6, 1, 6,	6, 5, 6, 9, 5, 2, 6, 2, 3, 7, 4, 2,	6, 5, 6, 9, 5, 2, 6, 2, 3, 7, 4, 2,
1, 8, 2, 3, 9, 5, 7, 3, 9, 9, 6, 7, 9,	6, 1, 9, 8, 0, 0, 4, 7, 2, 1, 6, 1,	6, 1, 9, 8, 0, 0, 4, 7, 2, 1, 6, 1,
3, 6, 7, 7, 9, 2, 0, 7, 1, 6, 7, 8, 3,	8, 6, 7, 1, 2, 6, 1, 4, 1, 6, 2, 1,	8, 6, 7, 1, 2, 6, 1, 4, 1, 6, 2, 1,
8, 8, 4, 6, 8, 0, 4, 2, 9, 0, 4, 2, 7,	9, 5, 0, 0, 4, 6, 2, 5, 3, 3, 0, 5,	9, 5, 0, 0, 4, 6, 2, 5, 3, 3, 0, 5,
9, 6, 9, 9, 1, 5, 9, 4, 1, 4, 5, 5, 1,	0, 2, 2, 7, 6, 1, 1, 3, 9, 5, 6, 0,	0, 2, 2, 7, 6, 1, 1, 3, 9, 5, 6, 0,
0, 1, 3, 9, 6, 0, 4, 5, 5, 7, 1, 7, 1,		3, 4, 2, 8, 3, 7, 2, 9, 6, 1, 8, 3,
4, 5, 6, 1, 7, 3, 9, 0, 9, 5, 9, 5, 6,		1, 3, 8, 5, 1, 9, 0, 0, 4, 3, 4, 6,
2, 0, 7, 4, 0, 1, 6, 7, 3, 2, 7, 0, 6,		4, 6, 7, 8, 5, 2, 5, 6, 1, 6, 8, 5,
3, 1, 4, 3, 4, 3, 9, 9, 6, 0, 7, 9, 4,		2, 1, 1, 0, 4, 7, 0, 4, 9, 1, 4, 2,
3, 8, 1, 5, 4, 3, 2, 3, 1, 9, 9, 2, 1,		1, 4, 4, 5, 7, 2, 1, 2, 5, 3, 8, 0,
6, 9, 8, 1, 6, 2, 8, 4, 6, 8, 6, 5, 6,	6, 6, 0, 5, 2, 7, 5, 7, 5, 7, 9, 0,	6, 6, 0, 5, 2, 7, 5, 7, 5, 7, 9, 0,
9, 4, 1, 2, 1, 2, 2, 3, 4, 0, 7, 1, 0,	8, 3, 3, 4, 0, 3, 8, 4, 1, 4, 0, 8,	8, 3, 3, 4, 0, 3, 8, 4, 1, 4, 0, 8,
7, 9, 1, 2, 9, 6, 1, 6, 9, 3, 2, 1, 9,	4, 8, 3, 1, 2, 5, 6, 8, 2, 9, 2, 6,	4, 8, 3, 1, 2, 5, 6, 8, 2, 9, 2, 6,
7, 8, 6, 5, 2, 0, 3, 3, 5, 3, 5, 5, 9,	5, 5, 5, 1, 0, 5, 1, 9, 6, 2, 2, 3,	5, 5, 5, 1, 0, 5, 1, 9, 6, 2, 2, 3,
5, 7, 6, 1, 5, 1, 0, 7, 1, 8, 6, 7, 7,	0, 7, 6, 8, 7, 7, 8, 2, 0, 9, 3, 1,	0, 7, 6, 8, 7, 7, 8, 2, 0, 9, 3, 1,
8, 3, 9, 0, 0, 6, 0, 0, 6, 8, 6, 9, 6,	5, 3, 1, 4, 6, 7, 5, 9, 9, 3, 8, 5,	5, 3, 1, 4, 6, 7, 5, 9, 9, 3, 8, 5,
1, 3, 1, 7, 5, 3, 5, 8, 3, 5, 8, 6, 1,		2, 3, 4, 0, 5, 9, 1, 7, 2, 9, 8, 2,
5, 6, 2, 2, 4, 6, 0, 2, 6, 7, 8, 0, 5,		0, 7, 0, 9, 0, 2, 6, 6, 8, 5, 5, 6,
9, 5, 1, 1, 2, 3, 4, 7, 5, 7, 0, 8, 2,		0, 1, 8, 0, 9, 2, 4, 9, 8, 3, 6, 3,
4, 4, 0, 1, 8, 8, 3, 1, 6, 4, 2, 8, 3,	9, 2, 2, 6, 5, 7, 3, 5, 0, 6, 6, 8,	9, 2, 2, 6, 5, 7, 3, 5, 0, 6, 6, 8,
8, 6, 0, 7, 4, 9, 8, 2, 2, 5, 8, 7, 2,		4, 6, 7, 8, 6, 9, 4, 1, 3, 2, 1, 8,
7, 4, 3, 5, 2, 8, 3, 2, 9, 5, 1, 5, 1,		0, 0, 7, 2, 1, 5, 3, 4, 3, 2, 4, 1,
7, 7, 3, 5, 2, 1, 8, 1, 0, 5, 0, 2, 0,	3, 0, 3, 9, 8, 6, 3, 5, 5, 9, 9, 3,	3, 0, 3, 9, 8, 6, 3, 5, 5, 9, 9, 3,
6, 3, 0, 4, 3, 7, 3, 5, 7, 6, 6, 0, 8,	1, 2, 4, 7, 4, 0, 3, 7, 8, 4, 3, 4,	1, 2, 4, 7, 4, 0, 3, 7, 8, 4, 3, 4,
2, 7, 1, 3, 4, 6, 8, 8, 2, 8, 4, 7, 6,	4, 3, 0, 5, 8, 0, 8, 2, 6, 0, 4, 0,	4, 3, 0, 5, 8, 0, 8, 2, 6, 0, 4, 0,
2, 0, 0, 0, 7, 6, 9, 2, 4, 7, 3, 1, 1,	3, 4, 4, 8, 1, 2, 0, 0, 0, 1, 9, 2,	3, 4, 4, 8, 1, 2, 0, 0, 0, 1, 9, 2,
7, 0, 3, 4, 5, 6, 9, 0, 5, 5, 9, 5, 1,	4, 6, 6, 9, 4, 8, 9, 5, 2, 2, 4, 9,	4, 6, 6, 9, 4, 8, 9, 5, 2, 2, 4, 9,
1, 3, 5, 5, 0, 9, 9, 6, 4, 7, 3, 9, 3,	8, 6, 8, 5, 9, 5, 8, 1, 0, 5, 1, 4,	8, 6, 8, 5, 9, 5, 8, 1, 0, 5, 1, 4,
5, 1, 2, 1, 0, 8, 1, 7, 9, 8, 8, 3, 7,	4, 6, 3, 6, 5, 2, 6, 2, 0, 7, 4, 1,	4, 6, 3, 6, 5, 2, 6, 2, 0, 7, 4, 1,
0, 8, 0, 8, 2, 9, 9, 1, 0, 8, 2, 9, 7,	2, 7, 3, 4, 4, 9, 3, 9, 2, 9, 1, 3,	2, 7, 3, 4, 4, 9, 3, 9, 2, 9, 1, 3,
2, 1, 1, 7, 6, 1, 4, 6, 2, 0, 7, 1, 7,	0, 4, 1, 0, 2, 4, 9, 3, 3, 1, 3, 0,	0, 4, 1, 0, 2, 4, 9, 3, 3, 1, 3, 0,
7, 4, 8, 8, 0, 8, 7, 5, 7, 0, 3, 1, 5,	8, 8, 7, 4, 5, 9, 9, 9, 6, 6, 4, 4,	8, 8, 7, 4, 5, 9, 9, 9, 6, 6, 4, 4,
3, 8, 8, 5, 7, 6, 5, 0, 1, 7, 0, 0, 9,	2, 5, 0, 1, 0, 8, 9, 0, 4, 8, 5, 6,	2, 5, 0, 1, 0, 8, 9, 0, 4, 8, 5, 6,
6, 4, 7, 2, 2, 4, 2, 5, 7, 8, 9, 3, 0,	8, 1, 0, 9, 1, 8, 2, 6, 1, 0, 9, 9,	8, 1, 0, 9, 1, 8, 2, 6, 1, 0, 9, 9,
1, 3, 9, 7, 4, 7, 9, 7, 0, 6, 1, 2, 9,	2, 5, 9, 4, 1, 7, 5, 6, 5, 4, 3, 9,	2, 5, 9, 4, 1, 7, 5, 6, 5, 4, 3, 9,
8, 3, 9, 5, 5, 7, 9, 7, 0, 0, 3, 6, 4,	3, 9, 4, 1, 6, 7, 6, 3, 1, 6, 6, 5,	3, 9, 4, 1, 6, 7, 6, 3, 1, 6, 6, 5,
7, 0, 1, 3, 4, 0, 5, 0, 2, 8, 7, 9, 6,	2, 5, 9, 7, 6, 9, 3, 3, 1, 2, 5, 0,	2, 5, 9, 7, 6, 9, 3, 3, 1, 2, 5, 0,
1, 0, 8, 2, 4, 7, 2, 0, 7, 0, 8, 4, 1,	2, 5, 6, 7, 2, 3, 0, 7, 9, 0, 2, 2,	2, 5, 6, 7, 2, 3, 0, 7, 9, 0, 2, 2,
7, 6, 8, 9, 7, 2, 4, 9, 1, 3, 7, 9, 8,	9, 5, 9, 1, 9, 6, 1, 7, 4, 1, 6, 7,	9, 5, 9, 1, 9, 6, 1, 7, 4, 1, 6, 7,
6, 0, 4, 3, 2, 6, 9, 3, 0, 8, 0, 0, 2,	0, 5, 9, 8, 1, 2, 2, 5, 6, 3, 3, 4,	0, 5, 9, 8, 1, 2, 2, 5, 6, 3, 3, 4,
4, 4, 9, 3, 4, 9, 1, 4, 2, 2, 9, 5, 7,	8, 8, 1, 0, 5, 2, 7, 1, 6, 7, 3, 1,	8, 8, 1, 0, 5, 2, 7, 1, 6, 7, 3, 1,
8, 9, 7, 0, 9, 5, 4, 7, 2, 1, 3, 3, 2,	1, 8, 9, 7, 6, 3, 3, 4, 0, 0, 9, 2,	1, 8, 9, 7, 6, 3, 3, 4, 0, 0, 9, 2,
	6, 2, 4, 2, 2, 1, 3, 6, 6, 6, 8, 5,	6, 2, 4, 2, 2, 1, 3, 6, 6, 6, 8, 5,
6, 8, 8, 8, 2, 8, 9, 5, 6, 5, 0, 5, 9,		8, 8, 1, 3, 6, 9, 6, 5, 2, 3, 0, 2,
7, 2, 2, 3, 9, 3, 1, 8, 6, 9, 1, 1, 4,		2, 1, 0, 1, 9, 1, 4, 4, 9, 3, 2, 3,
9, 0, 9, 1, 3, 1, 9, 1, 0, 5, 3, 6, 9,	4, 0, 3, 4, 5, 8, 3, 6, 3, 5, 6, 8,	4, 0, 3, 4, 5, 8, 3, 6, 3, 5, 6, 8,
0, 3, 6, 5, 6, 1, 0, 7, 4, 2, 3, 3, 1,	4, 1, 1, 5, 1, 2, 8, 2, 5, 0, 2, 8,	4, 1, 1, 5, 1, 2, 8, 2, 5, 0, 2, 8,
	9, 1, 2, 5, 4, 9, 2, 7, 0, 5, 1, 5,	9, 1, 2, 5, 4, 9, 2, 7, 0, 5, 1, 5,
	6, 2, 2, 9, 3, 9, 3, 9, 6, 9, 8, 3,	6, 2, 2, 9, 3, 9, 3, 9, 6, 9, 8, 3,
3, 4, 9, 1, 5, 0, 6, 3, 4, 9, 4, 3, 3,		3, 1, 8, 8, 5, 4, 3, 5, 7, 5, 8, 5,
6, 3, 6, 8, 1, 9, 7, 4, 5, 7, 4, 9, 5,		5, 8, 0, 2, 5, 4, 0, 7, 8, 9, 0, 2,
0, 9, 7, 4, 1, 8, 0, 7, 5, 0, 2, 7, 8,	6, 4, 4, 2, 3, 8, 3, 0, 3, 8, 4, 2,	6, 4, 4, 2, 3, 8, 3, 0, 3, 8, 4, 2,
0, 9, 4, 5, 2, 0, 9, 6, 4, 7, 0};	6, 6, 6, 4, 2, 3, 0, 2, 6, 9, 2, 8,	6, 6, 6, 4, 2, 3, 0, 2, 6, 9, 2, 8,
int k = 990;	3, 8, 0, 6, 8, 3, 5, 0, 9, 6, 0, 7,	3, 8, 0, 6, 8, 3, 5, 0, 9, 6, 0, 7,
LLNode* head =	2, 5, 0, 3, 2, 8, 8, 2, 5, 5, 3, 6,	2, 5, 0, 3, 2, 8, 8, 2, 5, 5, 3, 6,
LLNode::createWithIterators(arr, arr +		9, 4, 9, 2, 2, 9, 6, 6, 7, 5, 7, 4,
<pre>sizeof(arr) / sizeof(int));</pre>	6, 9, 8, 9, 7, 9, 2, 7, 0, 4, 9, 0,	6, 9, 8, 9, 7, 9, 2, 7, 0, 4, 9, 0,
LLNode::printList(head);	6, 2, 8, 1, 3, 0, 3, 4, 7, 0, 7, 2,	6, 2, 8, 1, 3, 0, 3, 4, 7, 0, 7, 2,
cout << "\n";	1, 7, 4, 2, 0, 6, 5, 6, 3, 6, 6, 9,	1, 7, 4, 2, 0, 6, 5, 6, 3, 6, 6, 9,
LLNode* newhead =	1, 3, 0, 8, 4, 9, 7, 1, 6, 8, 4, 9,	1, 3, 0, 8, 4, 9, 7, 1, 6, 8, 4, 9,
<pre>rotateLinkedList(head, k);</pre>	8, 3, 4, 0, 2, 2, 4, 6, 2, 7, 9, 0,	8, 3, 4, 0, 2, 2, 4, 6, 2, 7, 9, 0,
<pre>LLNode::printList(newhead);</pre>	3, 8, 0, 6, 0, 6, 7, 7, 9, 6, 0, 4,	3, 8, 0, 6, 0, 6, 7, 7, 9, 6, 0, 4,

Test	Expected	Got	
	5, 7, 6, 2, 8, 5, 5, 3, 7, 1, 2, 8,	5, 7, 6, 2, 8, 5, 5, 3, 7, 1, 2, 8,	
	8, 4, 1, 8, 1, 8, 7, 8, 4, 0, 1, 6,	8, 4, 1, 8, 1, 8, 7, 8, 4, 0, 1, 6,	
	3, 0, 2, 3, 6, 0, 8, 2, 0, 7, 8, 7,	3, 0, 2, 3, 6, 0, 8, 2, 0, 7, 8, 7,	
	1, 3, 3, 5, 0, 0, 1, 5, 2, 7, 5, 2, 5, 1, 6, 4, 9, 9, 7, 2, 1, 3, 3, 3,	1, 3, 3, 5, 0, 0, 1, 5, 2, 7, 5, 2, 5, 1, 6, 4, 9, 9, 7, 2, 1, 3, 3, 3,	
	2, 2, 5, 9, 0, 7, 0, 0, 1, 0, 6, 2,	2, 2, 5, 9, 0, 7, 0, 0, 1, 0, 6, 2,	
	1, 1, 9, 4, 3, 3, 4, 9, 9, 5, 7, 2,	1, 1, 9, 4, 3, 3, 4, 9, 9, 5, 7, 2,	
	3, 7, 8, 4, 2, 4, 0, 0, 7, 5, 7, 1,	3, 7, 8, 4, 2, 4, 0, 0, 7, 5, 7, 1,	
	9, 5, 7, 7, 6, 0, 6, 7, 8, 5, 9, 9,	9, 5, 7, 7, 6, 0, 6, 7, 8, 5, 9, 9,	
	4, 9, 2, 6, 8, 4, 1, 1, 8, 1, 0, 2,	4, 9, 2, 6, 8, 4, 1, 1, 8, 1, 0, 2,	
	4, 6, 3, 0, 8, 9, 1, 6, 6, 2, 3, 6, 6, 3, 9, 8, 7, 5, 5, 8, 3, 8, 4, 1,	4, 6, 3, 0, 8, 9, 1, 6, 6, 2, 3, 6, 6, 3, 9, 8, 7, 5, 5, 8, 3, 8, 4, 1,	
	6, 6, 6]	6, 6, 6]	
int arr[] = {9, 9, 7, 1, 0, 8, 1, 7,	[9, 9, 7, 1, 0, 8, 1, 7, 1, 6, 9, 1,	[9, 9, 7, 1, 0, 8, 1, 7, 1, 6, 9, 1,	~
1, 6, 9, 1, 8, 4, 3, 4, 8, 5, 7, 0, 0,	8, 4, 3, 4, 8, 5, 7, 0, 0, 0, 2, 1,	8, 4, 3, 4, 8, 5, 7, 0, 0, 0, 2, 1,	
0, 2, 1, 9, 5, 5, 3, 3, 4, 2, 0, 1, 4,	9, 5, 5, 3, 3, 4, 2, 0, 1, 4, 6, 2,	9, 5, 5, 3, 3, 4, 2, 0, 1, 4, 6, 2,	
6, 2, 9, 0, 9, 9, 0, 2, 7, 3, 5, 9, 8,	9, 0, 9, 9, 0, 2, 7, 3, 5, 9, 8, 2,	9, 0, 9, 9, 0, 2, 7, 3, 5, 9, 8, 2,	
2, 5, 4, 3, 4, 6, 3, 8, 1, 2, 0, 3, 3,		5, 4, 3, 4, 6, 3, 8, 1, 2, 0, 3, 3,	
9, 6, 3, 4, 5, 4, 9, 3, 6, 5, 2, 5, 0, 1, 3, 3, 0, 5, 9, 2, 6, 5, 4, 9, 6, 4,		9, 6, 3, 4, 5, 4, 9, 3, 6, 5, 2, 5, 0, 1, 3, 3, 0, 5, 9, 2, 6, 5, 4, 9,	
7, 5, 0, 3, 4, 3, 9, 2, 7, 5, 5, 5, 2,		6, 4, 7, 5, 0, 3, 4, 3, 9, 2, 7, 5,	
7, 5, 3, 4, 9, 3, 5, 1, 1, 4, 1, 9, 9,		5, 5, 2, 7, 5, 3, 4, 9, 3, 5, 1, 1,	
0, 8, 4, 6, 4, 2, 1, 0, 5, 4, 0, 4, 4,	4, 1, 9, 9, 0, 8, 4, 6, 4, 2, 1, 0,	4, 1, 9, 9, 0, 8, 4, 6, 4, 2, 1, 0,	
0, 0, 8, 4, 5, 3, 7, 0, 7, 1, 6, 0, 2,		5, 4, 0, 4, 4, 0, 0, 8, 4, 5, 3, 7,	
8, 6, 8, 1, 6, 5, 6, 5, 7, 7, 8, 1, 7,		0, 7, 1, 6, 0, 2, 8, 6, 8, 1, 6, 5,	
3, 1, 7, 1, 9, 2, 4, 6, 2, 1, 8, 8, 4, 0, 9, 0, 8, 8, 6, 6, 8, 8, 2, 2, 1, 2,		6, 5, 7, 7, 8, 1, 7, 3, 1, 7, 1, 9, 2, 4, 6, 2, 1, 8, 8, 4, 0, 9, 0, 8,	
2, 8, 7, 8, 4, 3, 6, 4, 1, 0, 9, 1, 4,		8, 6, 6, 8, 8, 2, 2, 1, 2, 2, 8, 7,	
0, 6, 1, 6, 1, 7, 6, 1, 9, 6, 5, 5, 9,		8, 4, 3, 6, 4, 1, 0, 9, 1, 4, 0, 6,	
4, 7, 8, 8, 5, 4, 9, 2, 7, 1, 1, 6, 9,	1, 6, 1, 7, 6, 1, 9, 6, 5, 5, 9, 4,	1, 6, 1, 7, 6, 1, 9, 6, 5, 5, 9, 4,	
6, 9, 8, 7, 8, 8, 0, 3, 0, 8, 6, 0, 3,		7, 8, 8, 5, 4, 9, 2, 7, 1, 1, 6, 9,	
3, 5, 1, 9, 4, 5, 2, 8, 6, 3, 0, 3, 9,	6, 9, 8, 7, 8, 8, 0, 3, 0, 8, 6, 0,	6, 9, 8, 7, 8, 8, 0, 3, 0, 8, 6, 0,	
5, 2, 4, 2, 4, 1, 4, 1, 3, 7, 4, 0, 0, 1, 2, 8, 4, 8, 1, 1, 6, 3, 8, 9, 7, 7,		3, 3, 5, 1, 9, 4, 5, 2, 8, 6, 3, 0, 3, 9, 5, 2, 4, 2, 4, 1, 4, 1, 3, 7,	
5, 8, 1, 8, 3, 4, 9, 5, 5, 1, 3, 4, 9,		4, 0, 0, 1, 2, 8, 4, 8, 1, 1, 6, 3,	
2, 3, 8, 9, 1, 9, 7, 5, 7, 0, 0, 4, 9,		8, 9, 7, 7, 5, 8, 1, 8, 3, 4, 9, 5,	
8, 9, 4, 3, 2, 4, 9, 3, 4, 5, 6, 8, 6,	5, 1, 3, 4, 9, 2, 3, 8, 9, 1, 9, 7,	5, 1, 3, 4, 9, 2, 3, 8, 9, 1, 9, 7,	
7, 9, 0, 4, 5, 6, 2, 4, 8, 4, 5, 2, 5,		5, 7, 0, 0, 4, 9, 8, 9, 4, 3, 2, 4,	
	9, 3, 4, 5, 6, 8, 6, 7, 9, 0, 4, 5,	9, 3, 4, 5, 6, 8, 6, 7, 9, 0, 4, 5,	
7, 0, 5, 4, 9, 5, 8, 3, 9, 3, 9, 5, 9, 9, 6, 6, 8, 9, 6, 8, 5, 5, 4, 1, 1, 6,		6, 2, 4, 8, 4, 5, 2, 5, 7, 4, 5, 3, 1, 5, 2, 7, 9, 7, 8, 1, 2, 7, 0, 5,	
4, 5, 9, 7, 5, 5, 0, 7, 7, 8, 3, 0, 1,		4, 9, 5, 8, 3, 9, 3, 9, 5, 9, 9, 6,	
1, 9, 8, 5, 0, 7, 1, 2, 5, 8, 2, 2, 4,	6, 8, 9, 6, 8, 5, 5, 4, 1, 1, 6, 4,	6, 8, 9, 6, 8, 5, 5, 4, 1, 1, 6, 4,	
8, 5, 6, 5, 1, 5, 8, 6, 3, 9, 2, 7, 0,	5, 9, 7, 5, 5, 0, 7, 7, 8, 3, 0, 1,	5, 9, 7, 5, 5, 0, 7, 7, 8, 3, 0, 1,	
3, 5, 3, 2, 1, 0, 8, 4, 0, 8, 8, 0, 7,		1, 9, 8, 5, 0, 7, 1, 2, 5, 8, 2, 2,	
5, 6, 3, 7, 4, 5, 2, 7, 6, 9, 4, 5, 0, 2 6 9 3 2 5 6 7 5 4 9 5 4		4, 8, 5, 6, 5, 1, 5, 8, 6, 3, 9, 2, 7 0 3 5 3 2 1 0 8 4 0 8	
2, 6, 9, 3, 2, 5, 6, 7, 5, 4, 9, 5, 4, 9, 9, 4, 8, 0, 8, 6, 0, 5, 4, 1, 7, 2,		7, 0, 3, 5, 3, 2, 1, 0, 8, 4, 0, 8, 8, 0, 7, 5, 6, 3, 7, 4, 5, 2, 7, 6,	
7, 4, 1, 6, 8, 9, 1, 7, 7, 0, 5, 3, 3,		9, 4, 5, 0, 2, 6, 9, 3, 2, 5, 6, 7,	
5, 4, 1, 0, 5, 2, 3, 3, 2, 3, 8, 3, 9,		5, 4, 9, 5, 4, 9, 9, 4, 8, 0, 8, 6,	
1, 6, 8, 3, 4, 8, 0, 3, 3, 9, 1, 4, 5,		0, 5, 4, 1, 7, 2, 7, 4, 1, 6, 8, 9,	
0, 7, 8, 7, 4, 3, 0, 4, 2, 3, 1, 5, 0,		1, 7, 7, 0, 5, 3, 3, 5, 4, 1, 0, 5,	
1, 8, 5, 0, 5, 3, 6, 9, 2, 7, 6, 7, 2,		2, 3, 3, 2, 3, 8, 3, 9, 1, 6, 8, 3,	
5, 5, 5, 8, 8, 4, 2, 2, 0, 8, 1, 7, 3, 9, 9, 3, 0, 3, 4, 5, 2, 4, 5, 9, 2, 0,		4, 8, 0, 3, 3, 9, 1, 4, 5, 0, 7, 8, 7, 4, 3, 0, 4, 2, 3, 1, 5, 0, 1, 8,	
0, 0, 9, 7, 5, 7, 1, 7, 6, 4, 2, 3, 3,		5, 0, 5, 3, 6, 9, 2, 7, 6, 7, 2, 5,	
5, 9, 6, 6, 1, 3, 9, 0, 5, 3, 5, 6, 6,		5, 5, 8, 8, 4, 2, 2, 0, 8, 1, 7, 3,	
7, 0, 6, 4, 1, 1, 5, 8, 4, 8, 0, 5, 9,	9, 9, 3, 0, 3, 4, 5, 2, 4, 5, 9, 2,	9, 9, 3, 0, 3, 4, 5, 2, 4, 5, 9, 2,	
9, 6, 7, 7, 9, 5, 8, 8, 2, 5, 7, 9, 4,		0, 0, 0, 9, 7, 5, 7, 1, 7, 6, 4, 2,	
1, 9, 2, 2, 5, 4, 0, 3, 3, 2, 4, 9, 2,		3, 3, 5, 9, 6, 6, 1, 3, 9, 0, 5, 3,	
0, 2, 0, 0, 5, 9, 9, 3, 9, 3, 3, 4, 9, 8, 3, 6, 4, 3, 8, 8, 1, 4, 2, 9, 1, 2,		5, 6, 6, 7, 0, 6, 4, 1, 1, 5, 8, 4, 8, 0, 5, 9, 9, 6, 7, 7, 9, 5, 8, 8,	
5, 6, 3, 4, 1, 5, 9, 0, 1, 7, 2, 5, 5,		2, 5, 7, 9, 4, 1, 9, 2, 2, 5, 4, 0,	
		3, 3, 2, 4, 9, 2, 0, 2, 0, 0, 5, 9,	
6, 1, 7, 1, 0, 7, 4, 0, 5, 1, 3, 9, 7,	- , - , , , , , , , , , , , , , , , ,		

Test	Expected	Got
5, 6, 5, 6, 0, 2, 1, 7, 8, 7, 7, 0, 2,	8, 8, 1, 4, 2, 9, 1, 2, 5, 6, 3, 4,	8, 8, 1, 4, 2, 9, 1, 2, 5, 6, 3, 4,
8, 4, 2, 2, 7, 6, 8, 5, 0, 9, 5, 0, 0,	1, 5, 9, 0, 1, 7, 2, 5, 5, 6, 1, 7,	1, 5, 9, 0, 1, 7, 2, 5, 5, 6, 1, 7,
0, 9, 9, 5, 3, 7, 2, 0, 8, 9, 4, 5, 0,	1, 0, 7, 4, 0, 5, 1, 3, 9, 7, 7, 4,	1, 0, 7, 4, 0, 5, 1, 3, 9, 7, 7, 4,
5, 9, 2, 6, 2, 5, 3, 3, 5, 2, 2, 8, 3,	4, 5, 6, 0, 0, 6, 2, 2, 4, 8, 2, 5,	4, 5, 6, 0, 0, 6, 2, 2, 4, 8, 2, 5,
0, 3, 9, 7, 8, 3, 2, 8, 6, 9, 6, 6, 6,	6, 5, 6, 0, 2, 1, 7, 8, 7, 7, 0, 2,	6, 5, 6, 0, 2, 1, 7, 8, 7, 7, 0, 2,
5, 1, 7, 3, 3, 7, 1, 9, 3, 5, 1, 4, 3,	8, 4, 2, 2, 7, 6, 8, 5, 0, 9, 5, 0,	8, 4, 2, 2, 7, 6, 8, 5, 0, 9, 5, 0,
4, 2, 0, 2, 0, 1, 0, 2, 1, 6, 3, 2, 9,	0, 0, 9, 9, 5, 3, 7, 2, 0, 8, 9, 4,	0, 0, 9, 9, 5, 3, 7, 2, 0, 8, 9, 4,
8, 3, 2, 1, 7, 1, 8, 0, 7, 2, 4, 6, 4,	5, 0, 5, 9, 2, 6, 2, 5, 3, 3, 5, 2,	5, 0, 5, 9, 2, 6, 2, 5, 3, 3, 5, 2,
1, 6, 5, 6, 8, 5, 4, 5, 5, 4, 0, 6, 8,	2, 8, 3, 0, 3, 9, 7, 8, 3, 2, 8, 6,	2, 8, 3, 0, 3, 9, 7, 8, 3, 2, 8, 6,
5, 1, 2, 5, 0, 5, 9, 3, 8, 1, 7, 8, 5,	9, 6, 6, 6, 5, 1, 7, 3, 3, 7, 1, 9,	9, 6, 6, 6, 5, 1, 7, 3, 3, 7, 1, 9,
6, 9, 5, 6, 1, 1, 0, 6, 1, 8, 0, 4, 7,	3, 5, 1, 4, 3, 4, 2, 0, 2, 0, 1, 0,	3, 5, 1, 4, 3, 4, 2, 0, 2, 0, 1, 0,
5, 4, 9, 7, 5, 1, 7, 7, 2, 7, 8, 4, 6,	2, 1, 6, 3, 2, 9, 8, 3, 2, 1, 7, 1,	2, 1, 6, 3, 2, 9, 8, 3, 2, 1, 7, 1,
0, 2, 6, 4, 9, 5, 0, 1, 1, 2, 0, 2, 8,	8, 0, 7, 2, 4, 6, 4, 1, 6, 5, 6, 8,	8, 0, 7, 2, 4, 6, 4, 1, 6, 5, 6, 8,
4, 7, 2, 9, 2, 3, 3, 2, 2, 3, 2, 0, 0,	5, 4, 5, 5, 4, 0, 6, 8, 5, 1, 2, 5,	5, 4, 5, 5, 4, 0, 6, 8, 5, 1, 2, 5,
1, 8, 6, 4, 0, 1, 3, 7, 8, 4, 6, 7, 2,	0, 5, 9, 3, 8, 1, 7, 8, 5, 6, 9, 5,	0, 5, 9, 3, 8, 1, 7, 8, 5, 6, 9, 5,
0, 3, 5, 3, 1, 8, 8, 9, 3, 2, 8, 8, 3,	6, 1, 1, 0, 6, 1, 8, 0, 4, 7, 5, 4,	6, 1, 1, 0, 6, 1, 8, 0, 4, 7, 5, 4,
7, 5, 2, 9, 3, 7, 5, 4, 7, 4, 9, 2, 6,	9, 7, 5, 1, 7, 7, 2, 7, 8, 4, 6, 0,	9, 7, 5, 1, 7, 7, 2, 7, 8, 4, 6, 0,
9, 9, 2, 8, 3, 6, 7, 9, 6, 9, 6, 6, 1,	2, 6, 4, 9, 5, 0, 1, 1, 2, 0, 2, 8,	2, 6, 4, 9, 5, 0, 1, 1, 2, 0, 2, 8,
5, 0, 7, 5, 6, 7, 2, 2, 7, 3, 7, 5, 4,	4, 7, 2, 9, 2, 3, 3, 2, 2, 3, 2, 0,	4, 7, 2, 9, 2, 3, 3, 2, 2, 3, 2, 0,
		0, 1, 8, 6, 4, 0, 1, 3, 7, 8, 4, 6,
1, 5, 9, 3, 6, 5, 9, 3, 9, 4, 0, 9, 2, 0, 9, 0, 4, 9, 2, 3, 0, 9, 1, 7, 1, 7,	0, 1, 8, 6, 4, 0, 1, 3, 7, 8, 4, 6,	
	7, 2, 0, 3, 5, 3, 1, 8, 8, 9, 3, 2,	7, 2, 0, 3, 5, 3, 1, 8, 8, 9, 3, 2,
6, 2, 2, 7, 3, 0, 7, 8, 6, 0, 7, 8, 8,	8, 8, 3, 7, 5, 2, 9, 3, 7, 5, 4, 7,	8, 8, 3, 7, 5, 2, 9, 3, 7, 5, 4, 7,
6, 3, 1, 9, 6, 3, 2, 2, 1, 4, 1, 9, 6,	4, 9, 2, 6, 9, 9, 2, 8, 3, 6, 7, 9,	4, 9, 2, 6, 9, 9, 2, 8, 3, 6, 7, 9,
6, 6, 7, 7, 2, 1, 8, 8, 6, 8, 3, 5, 6,	6, 9, 6, 6, 1, 5, 0, 7, 5, 6, 7, 2,	6, 9, 6, 6, 1, 5, 0, 7, 5, 6, 7, 2,
3, 2, 1, 3, 8, 0, 4, 2, 0, 6, 5, 1, 6,	2, 7, 3, 7, 5, 4, 1, 5, 9, 3, 6, 5,	2, 7, 3, 7, 5, 4, 1, 5, 9, 3, 6, 5,
9, 5, 2, 1, 7, 4, 1, 0, 0, 7, 0, 0, 7,	9, 3, 9, 4, 0, 9, 2, 0, 9, 0, 4, 9,	9, 3, 9, 4, 0, 9, 2, 0, 9, 0, 4, 9,
3, 8, 7, 9, 9, 3, 0, 3, 2, 3, 3, 5, 8,	2, 3, 0, 9, 1, 7, 1, 7, 6, 2, 2, 7,	2, 3, 0, 9, 1, 7, 1, 7, 6, 2, 2, 7,
5, 1, 9, 9, 6, 4, 0, 0, 0, 8, 1, 4, 9,	3, 0, 7, 8, 6, 0, 7, 8, 8, 6, 3, 1,	3, 0, 7, 8, 6, 0, 7, 8, 8, 6, 3, 1,
6, 2, 0, 5, 9, 5, 8, 0, 3, 9, 2, 2, 4,	9, 6, 3, 2, 2, 1, 4, 1, 9, 6, 6, 6,	9, 6, 3, 2, 2, 1, 4, 1, 9, 6, 6, 6,
3, 4, 9, 5, 2, 6, 0, 4, 5, 4, 0, 5, 5,	7, 7, 2, 1, 8, 8, 6, 8, 3, 5, 6, 3,	7, 7, 2, 1, 8, 8, 6, 8, 3, 5, 6, 3,
4, 6, 6, 3, 8, 2, 7, 8, 0, 2, 5, 4, 5,	2, 1, 3, 8, 0, 4, 2, 0, 6, 5, 1, 6,	2, 1, 3, 8, 0, 4, 2, 0, 6, 5, 1, 6,
6, 3, 3, 6, 8, 1, 0, 6, 1, 5, 7, 2, 9,	9, 5, 2, 1, 7, 4, 1, 0, 0, 7, 0, 0,	9, 5, 2, 1, 7, 4, 1, 0, 0, 7, 0, 0,
3, 1, 8, 3, 0, 8, 8, 3, 2, 1, 7, 5, 5,	7, 3, 8, 7, 9, 9, 3, 0, 3, 2, 3, 3,	7, 3, 8, 7, 9, 9, 3, 0, 3, 2, 3, 3,
6, 0, 6, 8, 2, 6, 9, 7, 5, 1, 1, 6, 0,	5, 8, 5, 1, 9, 9, 6, 4, 0, 0, 0, 8,	5, 8, 5, 1, 9, 9, 6, 4, 0, 0, 0, 8,
6, 2, 1, 4, 5, 8, 7, 4, 3, 4, 6, 7, 9,	1, 4, 9, 6, 2, 0, 5, 9, 5, 8, 0, 3,	1, 4, 9, 6, 2, 0, 5, 9, 5, 8, 0, 3,
9, 8, 2, 5, 9, 6, 5, 0, 3, 2, 5, 7, 7,	9, 2, 2, 4, 3, 4, 9, 5, 2, 6, 0, 4,	9, 2, 2, 4, 3, 4, 9, 5, 2, 6, 0, 4,
4, 0, 8, 3, 4, 3, 2, 3, 0, 5, 6, 0, 2,	5, 4, 0, 5, 5, 4, 6, 6, 3, 8, 2, 7,	5, 4, 0, 5, 5, 4, 6, 6, 3, 8, 2, 7,
5, 7, 0, 4, 2, 3, 0, 9, 1, 9, 3, 7, 8,	8, 0, 2, 5, 4, 5, 6, 3, 3, 6, 8, 1,	8, 0, 2, 5, 4, 5, 6, 3, 3, 6, 8, 1,
4, 7, 0, 9, 8, 7, 3, 7, 5, 1, 7, 7, 4,	0, 6, 1, 5, 7, 2, 9, 3, 1, 8, 3, 0,	0, 6, 1, 5, 7, 2, 9, 3, 1, 8, 3, 0,
4, 1, 7, 8, 4, 0, 6, 4, 9, 5, 4, 5, 3,	8, 8, 3, 2, 1, 7, 5, 5, 6, 0, 6, 8,	8, 8, 3, 2, 1, 7, 5, 5, 6, 0, 6, 8,
7, 3, 3, 7, 2, 1, 6, 3, 4, 6, 3, 1, 5,	2, 6, 9, 7, 5, 1, 1, 6, 0, 6, 2, 1,	2, 6, 9, 7, 5, 1, 1, 6, 0, 6, 2, 1,
9, 7, 3, 6, 2, 0, 9, 7, 0, 0, 3, 1, 5,	4, 5, 8, 7, 4, 3, 4, 6, 7, 9, 9, 8,	4, 5, 8, 7, 4, 3, 4, 6, 7, 9, 9, 8,
6, 3, 8, 2, 1, 6, 3, 4, 8, 9, 2, 3, 5,	2, 5, 9, 6, 5, 0, 3, 2, 5, 7, 7, 4,	2, 5, 9, 6, 5, 0, 3, 2, 5, 7, 7, 4,
9, 1, 4, 6, 9, 5, 8, 6, 6, 3, 4, 7, 2,	0, 8, 3, 4, 3, 2, 3, 0, 5, 6, 0, 2,	0, 8, 3, 4, 3, 2, 3, 0, 5, 6, 0, 2,
3, 7, 0, 2, 2, 7, 6, 8, 9, 9, 7, 2, 0,	5, 7, 0, 4, 2, 3, 0, 9, 1, 9, 3, 7,	5, 7, 0, 4, 2, 3, 0, 9, 1, 9, 3, 7,
9, 0, 3, 9, 6, 5, 9, 4, 3, 6, 8, 4, 3,	8, 4, 7, 0, 9, 8, 7, 3, 7, 5, 1, 7,	8, 4, 7, 0, 9, 8, 7, 3, 7, 5, 1, 7,
1, 0, 7, 2, 7, 3, 9, 3, 2, 0, 1, 9, 2,	7, 4, 4, 1, 7, 8, 4, 0, 6, 4, 9, 5,	7, 4, 4, 1, 7, 8, 4, 0, 6, 4, 9, 5,
3, 9, 1, 3, 3, 6, 5, 6, 5, 5, 5, 9, 1,	4, 5, 3, 7, 3, 3, 7, 2, 1, 6, 3, 4,	4, 5, 3, 7, 3, 3, 7, 2, 1, 6, 3, 4,
4, 6, 5, 4, 3, 2, 8, 7, 0, 1, 4, 4, 8,	6, 3, 1, 5, 9, 7, 3, 6, 2, 0, 9, 7,	6, 3, 1, 5, 9, 7, 3, 6, 2, 0, 9, 7,
9, 7, 4, 1, 1, 9, 4, 1, 0, 9, 5, 8, 6,	0, 0, 3, 1, 5, 6, 3, 8, 2, 1, 6, 3,	0, 0, 3, 1, 5, 6, 3, 8, 2, 1, 6, 3,
6, 9, 1, 5, 6, 0,snip 9, 5,	4, 8, 9, 2, 3, 5, 9, 1, 4, 6, 9, 5,	4, 8, 9, 2, 3, 5, 9, 1, 4, 6, 9, 5,
6, 1, 4, 6, 9, 4, 3, 9, 1, 1, 9, 6, 7,	8, 6, 6, 3, 4, 7, 2, 3, 7, 0, 2, 2,	8, 6, 6, 3, 4, 7, 2, 3, 7, 0, 2, 2,
6, 3, 5, 9, 1, 7, 4, 9, 6, 9, 4, 1, 6,	7, 6, 8, 9, 9, 7, 2, 0, 9, 0, 3, 9,	7, 6, 8, 9, 9, 7, 2, 0, 9, 0, 3, 9,
9, 3, 3, 6, 1, 2, 4, 0, 2, 5, 7, 3, 0,	6, 5, 9, 4, 3, 6, 8, 4, 3, 1, 0, 7,	6, 5, 9, 4, 3, 6, 8, 4, 3, 1, 0, 7,
3, 5, 8, 8, 4, 6, 4, 2, 8, 0, 5, 9, 1,	2, 7, 3, 9, 3, 2, 0, 1, 9, 2, 3, 9,	2, 7, 3, 9, 3, 2, 0, 1, 9, 2, 3, 9,
2, 2, 8, 0, 3, 0, 7, 8, 1, 8, 3, 5, 2,	1, 3, 3, 6, 5, 6, 5, 5, 5, 9, 1, 4,	1, 3, 3, 6, 5, 6, 5, 5, 5, 9, 1, 4,
1, 5, 0, 4, 0, 1, 5, 7, 4, 7, 0, 7, 2,	6, 5, 4, 3, 2, 8, 7, 0, 1, 4, 4, 8,	6, 5, 4, 3, 2, 8, 7, 0, 1, 4, 4, 8,
9, 9, 4, 7, 9, 1, 7, 2, 9, 3, 7, 6, 0,	9, 7, 4, 1, 1, 9, 4, 1, 0, 9, 5, 8,	9, 7, 4, 1, 1, 9, 4, 1, 0, 9, 5, 8,
5, 2, 5, 0, 3, 4, 0, 7, 0, 0, 8, 6, 3,	6, 6, 9, 1, 5, 6, 0, 8, 0, 3, 3,	6, 6, 9, 1, 5, 6, 0, 8, 0, 3, 3,
	snip 3, 0, 7, 6, 6, 4, 1, 7,	snip 3, 0, 7, 6, 6, 4, 1, 7,
3, 0, 9, 6, 7, 2, 3, 5, 9, 7, 2, 4, 3,	5, 1, 2, 9, 2, 6, 3, 8, 7, 6, 7, 2,	5, 1, 2, 9, 2, 6, 3, 8, 7, 6, 7, 2,
3, 0, 9, 6, 7, 2, 3, 5, 9, 7, 2, 4, 3, 4, 1, 2, 1, 4, 7, 7, 9, 1, 1, 3, 0, 5,	3, 1, 2, 3, 2, 0, 3, 0, 7, 0, 7, 2,	
4, 1, 2, 1, 4, 7, 7, 9, 1, 1, 3, 0, 5,	9, 1, 3, 0, 2, 5, 8, 1, 1, 8, 9, 9,	9, 1, 3, 0, 2, 5, 8, 1, 1, 8, 9, 9,
4, 1, 2, 1, 4, 7, 7, 9, 1, 1, 3, 0, 5, 5, 1, 4, 5, 4, 5, 1, 8, 0, 2, 7, 4, 2,		9, 1, 3, 0, 2, 5, 8, 1, 1, 8, 9, 9, 7, 5, 9, 9, 4, 7, 5, 1, 5, 2, 0, 0,
4, 1, 2, 1, 4, 7, 7, 9, 1, 1, 3, 0, 5,	9, 1, 3, 0, 2, 5, 8, 1, 1, 8, 9, 9,	

Test	Expected	Got
2, 3, 0, 4, 1, 6, 4, 3, 8, 2, 2, 0, 9,	2, 3, 7, 5, 5, 5, 5, 7, 2, 6, 1, 0,	2, 3, 7, 5, 5, 5, 5, 7, 2, 6, 1, 0,
6, 7, 1, 1, 0, 8, 5, 5, 0, 6, 3, 7, 0,	2, 3, 1, 1, 9, 5, 1, 4, 5, 9, 1, 9,	2, 3, 1, 1, 9, 5, 1, 4, 5, 9, 1, 9,
0, 2, 3, 5, 8, 9, 9, 6, 8, 7, 5, 1, 2,	6, 5, 1, 7, 4, 1, 3, 0, 7, 6, 6, 3,	6, 5, 1, 7, 4, 1, 3, 0, 7, 6, 6, 3,
5, 0, 5, 8, 8, 1, 8, 6, 0, 0, 4, 0, 1,	8, 8, 9, 3, 8, 6, 5, 4, 1, 7, 3, 5,	8, 8, 9, 3, 8, 6, 5, 4, 1, 7, 3, 5,
3, 0, 2, 9, 1, 4, 9, 7, 2, 4, 8, 5, 0,	8, 0, 9, 8, 5, 3, 2, 6, 4, 4, 1, 6,	8, 0, 9, 8, 5, 3, 2, 6, 4, 4, 1, 6,
5, 4, 9, 4, 1, 6, 8, 9, 0, 8, 0, 0, 1,	3, 1, 5, 9, 9, 7, 9, 4, 4, 2, 8, 3,	3, 1, 5, 9, 9, 7, 9, 4, 4, 2, 8, 3,
7, 0, 4, 7, 2, 4, 2, 6, 5, 3, 1, 4, 3,	6, 0, 9, 8, 5, 1, 2, 3, 3, 7, 5, 7,	6, 0, 9, 8, 5, 1, 2, 3, 3, 7, 5, 7,
8, 8, 9, 7, 7, 6, 9, 5, 0, 7, 2, 4, 6,	0, 1, 2, 8, 3, 4, 4, 9, 3, 0, 2, 7,	0, 1, 2, 8, 3, 4, 4, 9, 3, 0, 2, 7,
4, 6, 0, 8, 9, 1, 2, 7, 6, 8, 1, 3, 2,	3, 2, 6, 4, 5, 3, 4, 9, 7, 1, 5, 8,	3, 2, 6, 4, 5, 3, 4, 9, 7, 1, 5, 8,
4, 1, 9, 3, 8, 4, 2, 6, 2, 5, 7, 8, 2,	7, 9, 9, 1, 7, 3, 1, 3, 5, 4, 4, 5,	7, 9, 9, 1, 7, 3, 1, 3, 5, 4, 4, 5,
7, 5, 7, 2, 2, 5, 6, 6, 3, 0, 6, 8, 3,	4, 4, 8, 2, 1, 0, 5, 2, 3, 8, 2, 9,	4, 4, 8, 2, 1, 0, 5, 2, 3, 8, 2, 9,
6, 8, 6, 1, 8, 0, 2, 8, 4, 4, 9, 1, 9,	2, 4, 3, 3, 7, 8, 1, 5, 5, 0, 4, 5,	2, 4, 3, 3, 7, 8, 1, 5, 5, 0, 4, 5,
3, 4, 6, 0, 3, 3, 0, 6, 7, 1, 4, 6, 4,	2, 7, 7, 0, 8, 0, 4, 1, 9, 2, 0, 1,	2, 7, 7, 0, 8, 0, 4, 1, 9, 2, 0, 1,
2, 3, 5, 5, 2, 6, 5, 9, 5, 0, 5, 6, 3,	6, 3, 9, 8, 3, 8, 3, 7, 1, 2, 5, 9,	6, 3, 9, 8, 3, 8, 3, 7, 1, 2, 5, 9,
2, 8, 1, 9, 7, 7, 4, 0, 7, 2, 4, 5, 5,	1, 2, 9, 7, 4, 2, 4, 5, 5, 7, 9, 6,	1, 2, 9, 7, 4, 2, 4, 5, 5, 7, 9, 6,
6, 2, 3, 9, 9, 7, 8, 7, 2, 1, 3, 6, 4,	9, 0, 6, 8, 0, 5, 3, 9, 1, 9, 9, 5,	9, 0, 6, 8, 0, 5, 3, 9, 1, 9, 9, 5,
3, 2, 7, 3, 7, 6, 2, 5, 1, 7, 4, 7, 2,	6, 1, 0, 6, 2, 0, 8, 1, 1, 2, 3, 5,	6, 1, 0, 6, 2, 0, 8, 1, 1, 2, 3, 5,
3, 4, 5, 2, 2, 9, 8, 3, 3, 0, 2, 8, 8,	6, 8, 6, 6, 4, 8, 7, 5, 4, 2, 7, 6,	6, 8, 6, 6, 4, 8, 7, 5, 4, 2, 7, 6,
6, 3, 7, 3, 0, 4, 8, 6, 1, 1, 1, 2, 2,	8, 0, 9, 2, 9, 5, 3, 3, 0, 6, 4, 8,	8, 0, 9, 2, 9, 5, 3, 3, 0, 6, 4, 8,
7, 3, 2, 0, 7, 1, 9, 4, 8, 0, 3, 4, 7,	8, 1, 6, 0, 5, 8, 6, 6, 1, 1, 0, 3,	8, 1, 6, 0, 5, 8, 6, 6, 1, 1, 0, 3,
3, 4, 3, 8, 1, 2, 2, 6, 3, 2, 8, 1, 1,	7, 4, 3, 0, 0, 3, 4, 0, 7, 0, 7, 1,	7, 4, 3, 0, 0, 3, 4, 0, 7, 0, 7, 1,
7, 6, 5, 3, 5, 7, 5, 6, 6, 7, 9, 8, 4,	3, 7, 5, 7, 5, 8, 9, 3, 5, 8, 8, 8,	3, 7, 5, 7, 5, 8, 9, 3, 5, 8, 8, 8,
8, 4, 0, 1, 1, 7, 0, 5, 5, 7, 3, 0, 9,	4, 5, 1, 2, 8, 6, 9, 6, 9, 2, 7, 6,	4, 5, 1, 2, 8, 6, 9, 6, 9, 2, 7, 6,
3, 3, 5, 9, 7, 1, 1, 3, 9, 6, 7, 8, 4,	9, 9, 4, 0, 8, 0, 4, 3, 5, 2, 0, 3,	9, 9, 4, 0, 8, 0, 4, 3, 5, 2, 0, 3,
7, 4, 5, 5, 8, 0, 6, 2, 7, 4, 6, 0, 3,	2, 6, 5, 8, 5, 2, 9, 8, 6, 9, 8, 1,	2, 6, 5, 8, 5, 2, 9, 8, 6, 9, 8, 1,
0, 4, 6, 5, 8, 0, 3, 4, 7, 9, 3, 8, 5,	7, 4, 9, 0, 2, 6, 8, 1, 9, 9, 1, 3,	7, 4, 9, 0, 2, 6, 8, 1, 9, 9, 1, 3,
2, 1, 6, 0, 9, 0, 4, 7, 9, 2, 0, 7, 2,	4, 5, 4, 1, 1, 7, 5, 2, 0, 4, 3, 5,	4, 5, 4, 1, 1, 7, 5, 2, 0, 4, 3, 5,
5, 6, 4, 9, 4, 1, 0, 8, 5, 6, 2, 0, 8,	3, 1, 4, 0, 7, 7, 9, 1, 8, 6, 3, 9,	3, 1, 4, 0, 7, 7, 9, 1, 8, 6, 3, 9,
0, 1, 4, 9, 0, 2, 3, 8, 3, 2, 4, 3, 0,	0, 7, 7, 4, 7, 4, 3, 8, 2, 6, 4, 0,	0, 7, 7, 4, 7, 4, 3, 8, 2, 6, 4, 0,
1, 0, 5, 3, 3, 2, 2, 8, 6, 0, 1, 1, 3,	5, 8, 8, 7, 2, 7, 3, 2, 3, 8, 7, 1,	5, 8, 8, 7, 2, 7, 3, 2, 3, 8, 7, 1,
1, 6, 1, 0, 3, 0, 6, 3, 8, 1, 0, 1, 0,	3, 3, 7, 2, 2, 1, 6, 3, 4, 6, 5, 3,	3, 3, 7, 2, 2, 1, 6, 3, 4, 6, 5, 3,
2, 2, 7, 1, 1, 1, 4, 6, 2, 2, 0, 8, 6,	4, 0, 2, 1, 2, 5, 1, 2, 6, 9, 6, 8,	4, 0, 2, 1, 2, 5, 1, 2, 6, 9, 6, 8,
6, 5, 9, 1, 0, 3, 1, 8, 2, 9, 2, 0, 8,	0, 9, 7, 7, 8, 8, 6, 9, 7, 8, 1, 5,	0, 9, 7, 7, 8, 8, 6, 9, 7, 8, 1, 5,
5, 2, 2, 6, 1, 1, 5, 3, 1, 0, 3, 3, 1,	3, 3, 8, 8, 4, 7, 6, 2, 2, 7, 0, 6,	3, 3, 8, 8, 4, 7, 6, 2, 2, 7, 0, 6,
8, 7, 8, 4, 1, 0, 1, 4, 2, 6, 5, 6, 9,	8, 1, 5, 2, 5, 6, 2, 1, 2, 4, 9, 2,	8, 1, 5, 2, 5, 6, 2, 1, 2, 4, 9, 2,
1, 8, 2, 1, 8, 6, 0, 0, 2, 5, 6, 6, 6,	6, 0, 2, 8, 0, 9, 9, 4, 7, 5, 4, 6,	6, 0, 2, 8, 0, 9, 9, 4, 7, 5, 4, 6,
5, 6, 0, 2, 3, 2, 0, 4, 5, 3, 8, 5, 2,	6, 5, 2, 3, 9, 2, 7, 0, 6, 7, 1, 5,	6, 5, 2, 3, 9, 2, 7, 0, 6, 7, 1, 5,
1, 1, 1, 7, 1, 3, 6, 7, 6, 0, 9, 3, 5,	4, 9, 8, 3, 2, 1, 4, 7, 9, 9, 6, 9,	4, 9, 8, 3, 2, 1, 4, 7, 9, 9, 6, 9,
3, 6, 5, 4, 8, 9, 9, 0, 9, 6, 8, 9, 6,	6, 6, 6, 0, 9, 8, 5, 7, 3, 4, 8, 0,	6, 6, 6, 0, 9, 8, 5, 7, 3, 4, 8, 0,
2, 6, 2, 3, 5, 0, 7, 3, 5, 1, 8, 6, 9,	4, 1, 1, 0, 9, 8, 4, 1, 7, 3, 1, 1,	4, 1, 1, 0, 9, 8, 4, 1, 7, 3, 1, 1,
4, 5, 9, 6, 8, 6, 1, 2, 0, 6, 5, 1, 0,	2, 5, 4, 4, 6, 2, 7, 4, 5, 8, 5, 3,	2, 5, 4, 4, 6, 2, 7, 4, 5, 8, 5, 3,
8, 5, 5, 6, 6, 8, 5, 0, 4, 5, 4, 0, 5,	0, 7, 1, 7, 3, 8, 5, 1, 1, 7, 2, 2,	0, 7, 1, 7, 3, 8, 5, 1, 1, 7, 2, 2,
6, 4, 0, 5, 5, 0, 1, 1, 6, 2, 9, 6, 1,	4, 3, 4, 5, 4, 3, 0, 3, 7, 2, 0, 9,	4, 3, 4, 5, 4, 3, 0, 3, 7, 2, 0, 9,
4, 0, 9, 8, 6, 7, 3, 0, 3, 7, 2, 8, 5,	3, 4, 2, 4, 3, 5, 7, 8, 4, 7, 4, 9,	3, 4, 2, 4, 3, 5, 7, 8, 4, 7, 4, 9,
6, 0, 8, 4, 2, 9, 9, 4, 8, 7, 8, 4, 7,	5, 6, 4, 5, 0, 5, 2, 9, 6, 9, 3, 5,	5, 6, 4, 5, 0, 5, 2, 9, 6, 9, 3, 5,
1, 3, 7, 0, 8, 3, 9, 3, 1, 0, 8, 7, 8,	6, 9, 9, 0, 5, 2, 1, 0, 4, 6, 1, 1,	6, 9, 9, 0, 5, 2, 1, 0, 4, 6, 1, 1,
4, 5, 2, 7, 4, 9, 9, 6, 0, 0, 9, 2, 3,	7, 8, 8, 5, 3, 5, 8, 1, 1, 2, 6, 8,	7, 8, 8, 5, 3, 5, 8, 1, 1, 2, 6, 8,
2, 2, 3, 3, 5, 7, 6, 8, 7, 6, 0, 1, 3,	1, 8, 2, 3, 9, 3, 0, 5, 8, 0, 0, 6,	1, 8, 2, 3, 9, 3, 0, 5, 8, 0, 0, 6,
6, 1, 3, 6, 5, 1, 7, 1, 7, 6, 3, 6, 8,	2, 4, 0, 2, 6, 2, 2, 8, 7, 1, 8, 6,	2, 4, 0, 2, 6, 2, 2, 8, 7, 1, 8, 6,
0, 5, 4, 2, 2, 2, 8, 3, 9, 8, 7, 8, 5,	8, 2, 7, 9, 3, 6, 3, 5, 7, 1, 7, 0,	8, 2, 7, 9, 3, 6, 3, 5, 7, 1, 7, 0,
2, 6, 5, 3, 2, 1, 0, 8, 7, 4, 4, 8, 9,	8, 6, 6, 6, 5, 2, 6, 3, 2, 6, 3, 5,	8, 6, 6, 6, 5, 2, 6, 3, 2, 6, 3, 5,
7, 9, 4, 1, 4, 6, 5, 3, 2, 8, 6, 8, 8,	6, 5, 2, 3, 1, 7, 0, 2, 3, 2, 3, 3,	6, 5, 2, 3, 1, 7, 0, 2, 3, 2, 3, 3,
2, 0, 1, 5, 3, 8, 5, 9, 8, 0, 3, 5, 8,	0, 6, 1, 5, 1, 1, 0, 2, 1, 7, 8, 8,	0, 6, 1, 5, 1, 1, 0, 2, 1, 7, 8, 8,
4, 6, 5, 0, 4, 0, 6, 6, 0, 1, 5, 0, 2,	6, 7, 2, 9, 6, 1, 0, 1, 2, 5, 0, 0,	6, 7, 2, 9, 6, 1, 0, 1, 2, 5, 0, 0,
4, 6, 8, 9, 7, 9, 4, 3, 9, 3, 6, 9, 3,	6, 5, 7, 7, 4, 6, 4, 7, 4, 1, 5, 6,	6, 5, 7, 7, 4, 6, 4, 7, 4, 1, 5, 6,
7, 2, 3, 2, 5, 8, 8, 0, 5, 2, 4, 2, 9,	3, 1, 7, 5, 6, 4, 4, 2, 8, 5, 7, 6,	3, 1, 7, 5, 6, 4, 4, 2, 8, 5, 7, 6,
2, 6, 4, 4, 1, 2, 1, 6, 7, 3, 7, 1, 7,	2, 8, 1, 2, 2, 0, 8, 9, 3, 5, 6, 4,	2, 8, 1, 2, 2, 0, 8, 9, 3, 5, 6, 4,
8, 9, 7, 6, 2, 8, 7, 8, 3, 2, 6, 3, 7,	3, 4, 0, 9, 7, 7, 0, 0, 9, 8, 8, 9,	3, 4, 0, 9, 7, 7, 0, 0, 9, 8, 8, 9,
	6, 4, 6, 6, 4, 8, 0, 8, 2, 8, 0, 0,	6, 4, 6, 6, 4, 8, 0, 8, 2, 8, 0, 0,
0, 2, 5, 5, 1, 4, 1, 6, 2, 9, 5, 9, 4,	4, 1, 3, 0, 2, 9, 7, 3, 3, 0, 5, 9,	4, 1, 3, 0, 2, 9, 7, 3, 3, 0, 5, 9,
0, 2, 5, 5, 1, 4, 1, 6, 2, 9, 5, 9, 4, 3, 2, 8, 7, 4, 8, 5, 1, 2, 9, 5, 0, 7,	, , , , , , , , , , , , , , , , , , , ,	
3, 2, 8, 7, 4, 8, 5, 1, 2, 9, 5, 0, 7,	0, 1, 4, 7, 1, 6, 4, 4, 1, 4, 8, 9,	0, 1, 4, 7, 1, 6, 4, 4, 1, 4, 8, 9,
3, 2, 8, 7, 4, 8, 5, 1, 2, 9, 5, 0, 7, 3, 1, 7, 0, 8, 3, 6, 5, 8, 5, 2, 7, 5,		0, 1, 4, 7, 1, 6, 4, 4, 1, 4, 8, 9, 7, 5, 9, 1, 9, 6, 5, 3, 4, 5, 3, 6,
	0, 1, 4, 7, 1, 6, 4, 4, 1, 4, 8, 9,	
3, 2, 8, 7, 4, 8, 5, 1, 2, 9, 5, 0, 7, 3, 1, 7, 0, 8, 3, 6, 5, 8, 5, 2, 7, 5, 0, 3, 0, 7, 3, 0, 6, 1, 5, 5, 5, 1, 5,	0, 1, 4, 7, 1, 6, 4, 4, 1, 4, 8, 9, 7, 5, 9, 1, 9, 6, 5, 3, 4, 5, 3, 6,	7, 5, 9, 1, 9, 6, 5, 3, 4, 5, 3, 6,

	Test	Expected	Got
	9, 6, 3, 2, 1, 5, 1, 0, 2, 8, 6, 6, 6, 2, 3, 5, 2, 6, 7, 1, 9, 9, 2, 2, 6, 5, 8, 0, 4, 3, 1, 9, 6, 8, 7, 4, 0, 3, 3, 7, 1, 3, 0, 2, 9, 1, 5, 7, 7, 6, 7, 8, 4, 5, 7, 5, 5, 5, 4, 9, 7, 2, 6, 6, 5, 3, 2, 1, 1, 9, 8, 9, 1, 6, 7, 8, 4, 6, 1, 7, 5, 1, 9, 3, 0, 5, 1, 1, 4, 2, 5, 1, 5, 2, 7, 4, 7, 9, 8, 9, 2, 0, 2, 9, 9, 6, 8, 4, 0, 9, 5, 6, 0, 8, 7, 1, 3, 1, 3, 1, 7, 3, 5, 2, 7, 2, 4, 2, 4, 4, 3, 7, 0, 8, 2, 1, 2, 0, 5, 6, 3, 6, 9, 6, 4, 7, 1, 7, 2, 1, 7, 6, 7, 0, 1, 6, 8, 6, 5, 1, 6, 0, 8, 5, 7, 4, 9, 5, 9, 2, 6, 4, 9, 3, 4, 4, 6, 7, 6, 6, 6, 5, 0, 4, 9, 4, 3, 9, 2, 6, 3, 0, 7, 6, 5, 6, 8, 8, 7, 6, 4, 5, 1, 8, 1, 4, 4, 3, 5, 6, 2, 2, 8, 8, 8, 0, 5, 8, 9, 0, 9, 0, 7, 0, 2, 6, 2, 3, 8, 1, 6, 5}; int k = 11111; LNode* head = LLNode::createWithIterators(arr, arr + sizeof(arr) / sizeof(int)); LLNode::printList(head); cout << "\n"; LLNode* newhead = rotateLinkedList(head, k); LLNode::printList(newhead);	8, 0, 2, 5, 1, 6, 8, 3, 1, 7, 8, 2, 6, 2, 0, 2, 7, 2, 6, 7, 3, 6, 1, 5, 6, 3, 0, 4, 6, 4, 4, 2, 4, 1, 6, 0, 5, 5, 9, 3, 8, 4, 3, 4, 9, 6, 2, 0, 4, 6, 0, 5, 6, 1, 8, 4, 2, 8, 7, 0, 2, 5, 4, 0, 5, 7, 4, 8, 5, 1, 2, 2, 1, 6, 5, 0, 9, 4, 6, 2, 7, 7, 4, 2, 9, 7, 6, 7, 5, 0, 5, 5, 2, 8, 8, 8, 8, 2, 0, 6, 2, 1, 8, 9, 5, 1, 2, 8, 1, 5, 5, 7, 2, 8, 6, 1, 9, 6, 9, 4, 1, 0, 0, 9, 4, 1, 1, 3, 9, 8, 1, 0, 4, 3, 2, 6, 5, 9, 8, 3, 7, 9, 4, 0, 6, 8, 8, 4, 1, 5, 0, 5, 6, 3, 3, 1, 0, 9, 3, 7, 6, 8, 7, 8, 1, 1, 0, 3, 1, 8, 9, 7, 9, 1, 8, 5, 8, 3, 3, 0, 7,	8, 0, 2, 5, 1, 6, 8, 3, 1, 7, 8, 2, 6, 2, 0, 2, 7, 2, 6, 7, 3, 6, 1, 5, 6, 3, 0, 4, 6, 4, 4, 2, 4, 1, 6, 0, 5, 5, 9, 3, 8, 4, 3, 4, 9, 6, 2, 0, 4, 6, 0, 5, 7, 4, 8, 5, 1, 2, 2, 1, 6, 5, 0, 9, 4, 6, 2, 7, 7, 4, 2, 9, 7, 6, 7, 5, 0, 5, 5, 2, 8, 8, 8, 8, 2, 0, 6, 2, 1, 8, 9, 5, 1, 2, 8, 1, 5, 5, 7, 2, 8, 6, 1, 9, 6, 9, 4, 1, 0, 0, 9, 4, 1, 1, 3, 9, 8, 1, 0, 4, 3, 2, 6, 5, 9, 8, 3, 7, 9, 4, 0, 6, 8, 8, 4, 1, 5, 0, 5, 6, 3, 3, 1, 0, 9, 3, 7, 6, 8, 7, 8, 1, 1, 0, 3, 1, 8, 9, 7, 9, 1, 8, 5, 8, 3, 3, 0, 7, 2, 3, 8, 9, 5, 0, 9, 4, 7, 7, 5, 6, 2, 2, 2, 6, 5, 3, 1, 9, 5, 1, 4, 7, 7, 4, 6, 6, 1, 6, 0, 6, 3, 8, 0, 4, 2, 2, 0, 5, 3, 9, 8, 7, 6, 3, 5, 1, 9, 4, 5, 0, 7, 9, 1, 9, 1, 3, 6, 3, 2, 3, 9, 2, 5, 6, 0, 2, 7, 2, 7, 9, 1, 5, 1, 4, 3, 9, 8, 6, 2, 1, 9, 0, 2, 8, 1, 9, 3, 5, 2, 7, 7, 9, 9, 9, 6, 6, 6, 7, 6, 1, 2, 7, 6, 4, 0, 9, 5, 6, 7, 5, 1, 3, 7, 7, 8, 1, 6, 8, 4, 5, 4, 7, 2, 4, 0, 1, 4, 8, 1, 2, 3, 0, 8, 8, 0, 5, 0, 5, 8, 4, 7, 8, 7, 0, 0, 0, 5, 0, 1, 0, 0, 1, 5, 5, 1, 4, 5, 7, 6, 8, 8, 9, 9, 9, 6, 5, 6, 7, 5, 1, 3, 7, 7, 8, 1, 6, 8, 4, 5, 7, 6, 8, 8, 9, 9, 9, 6, 5, 6, 8, 8, 7, 0, 7, 2, 4, 4, 4, 3, 1, 4, 5, 9, 8, 0, 8, 4, 9, 9, 6, 5, 6, 5, 2, 9, 2, 7, 6, 8, 8, 7, 0, 7, 2, 4, 4, 4, 3, 1, 4, 5, 9, 8, 0, 3, 9, 1, 2, 4, 5, 3, 5, 7, 9, 7, 7, 7, 7, 5, 6, 9, 9, 5, 5, 9, 9, 5, 6, 6, 8, 8, 7, 0, 7, 2, 4, 4, 4, 3, 1, 4, 5, 9, 8, 8, 3, 7, 1, 5, 3, 5, 0, 3, 4, 3, 7, 9, 6, 9, 6, 9, 6, 6, 6, 4, 7]
~	int arr[] = {4, 3, 0, 1, 8, 3, 3, 8, 6, 8, 6, 6, 4, 4, 9, 4, 6, 0, 6, 5, 2, 2, 9, 9, 1, 6, 2, 8, 1, 5, 8, 6, 5, 4, 0, 9, 9, 6, 2, 8, 1, 7, 2, 6, 4, 9, 8, 1, 7, 6, 6, 2, 4, 5, 5, 0, 6, 8, 9, 3, 6, 2, 7, 3, 0, 2, 6, 8, 9, 9, 6, 8, 2, 5, 0, 8, 0, 9, 7, 5, 6, 4, 5, 3, 1, 5, 5, 1, 4, 4, 9, 1, 0, 2, 3, 5, 4, 9, 3, 2, 2, 3, 9, 7, 8, 6, 7, 7, 4, 4, 8, 0, 6, 6, 2, 5, 8, 7, 6, 8, 7, 1, 7, 6, 1, 9, 2, 0, 3, 7, 1, 0, 0, 4, 5, 4, 4, 2, 9, 4, 6, 4, 5, 0, 8, 3, 9, 8, 2, 4, 9, 2, 4, 2, 6, 5, 2, 3, 5, 3, 8, 7, 6, 1, 2, 7, 9, 8, 7, 4, 8, 5, 4, 3, 1, 6, 0, 6, 6, 9, 4, 0, 4, 0, 0, 7, 8, 9, 4, 6, 7, 4, 3, 3, 7, 8, 7, 5, 7, 7, 9, 6, 1, 9, 4, 4, 1, 0, 9, 1, 2, 4, 8, 3, 1, 1, 7, 1, 7, 5, 5, 7, 1, 1, 1, 0, 0, 6, 7, 2, 3, 6, 6, 1, 4, 6, 8, 9, 7, 0, 8, 7, 8, 8, 0, 9, 0, 0, 2, 0, 5, 4, 6, 2, 3, 2, 1, 7, 5, 5, 7, 6, 3, 4, 2, 0, 1, 7, 7, 0, 5, 9, 3, 0, 6, 6, 1, 0, 2, 1, 6, 2, 4, 9, 8, 5, 4, 5, 3, 2, 9, 9, 8, 4, 0, 0, 7, 3, 1, 2, 0, 3, 8, 1, 2, 0, 6,	1, 6, 2, 8, 1, 5, 8, 6, 5, 4, 0, 9, 9, 6, 2, 8, 1, 7, 2, 6, 4, 9, 8, 1, 7, 6, 6, 2, 4, 5, 5, 0, 6, 8, 9, 3, 6, 2, 7, 3, 0, 2, 6, 8, 9, 9, 6, 8, 2, 5, 0, 8, 0, 9, 7, 5, 6, 4, 5, 3, 1, 5, 5, 1, 4, 4, 9, 1, 0, 2, 3, 5, 4, 9, 3, 2, 2, 3, 9, 7, 8, 6, 7, 7, 4, 4, 8, 0, 6, 6, 2, 5, 8, 7, 6, 8, 7, 1, 7, 6, 1, 9, 2, 0, 3, 7, 1, 0, 0, 4, 5, 4, 4, 2, 9, 4, 6, 4, 5, 0, 8, 3, 9, 8, 2, 4, 9, 2, 4, 2, 6, 5, 2, 3, 5, 3, 8, 7, 6, 1, 2, 7, 9, 8, 7, 4, 8, 5, 4, 3, 1, 6, 0, 6, 6, 9, 4, 0, 4, 0, 0, 7, 8, 9, 4, 6, 7, 4, 3, 3, 7, 8, 7, 5, 7, 7, 9, 6, 1, 9, 4, 4, 1, 0, 9, 1, 2, 4, 8, 3, 1, 1, 7, 1, 7, 5, 5, 7, 1, 1, 1, 0, 0, 6, 7, 2, 3, 6, 6, 1, 4, 6, 8, 9, 7, 0, 8, 7, 8, 8, 0, 9, 0, 0, 2, 0, 5, 4, 6, 2, 3, 2, 1, 7, 5, 5, 7, 6, 3, 4, 2, 0, 1, 7, 7, 0, 5, 9, 3, 0, 6, 6,	[4, 3, 0, 1, 8, 3, 3, 8, 6, 8, 6, 6, 4, 4, 9, 4, 6, 0, 6, 5, 2, 2, 9, 9, 1, 6, 2, 8, 1, 5, 8, 6, 5, 4, 0, 9, 9, 6, 2, 8, 1, 7, 2, 6, 4, 9, 8, 1, 7, 6, 6, 2, 4, 5, 5, 0, 6, 8, 9, 3, 6, 2, 7, 3, 0, 2, 6, 8, 9, 9, 6, 8, 2, 5, 0, 8, 0, 9, 7, 5, 6, 4, 5, 3, 1, 5, 5, 1, 4, 4, 9, 1, 0, 2, 3, 5, 4, 9, 3, 2, 2, 3, 9, 7, 8, 6, 7, 7, 4, 4, 8, 0, 6, 6, 2, 5, 8, 7, 6, 8, 7, 1, 7, 6, 1, 9, 2, 0, 3, 7, 1, 0, 0, 4, 5, 4, 4, 2, 9, 4, 6, 4, 5, 0, 8, 3, 9, 8, 2, 4, 9, 2, 4, 2, 6, 5, 2, 3, 5, 3, 8, 7, 6, 1, 2, 7, 9, 8, 7, 4, 8, 5, 4, 3, 1, 6, 0, 6, 6, 9, 4, 0, 4, 0, 0, 7, 8, 9, 4, 6, 7, 4, 3, 3, 7, 8, 7, 5, 7, 7, 9, 6, 1, 9, 4, 4, 1, 0, 9, 1, 2, 4, 8, 3, 1, 1, 7, 1, 7, 5, 5, 7, 1, 1, 1, 0, 0, 6, 7, 2, 3, 6, 6, 1, 4, 6, 8, 9, 7, 0, 8, 7, 8, 8, 0, 9, 0, 0, 2, 0, 5, 4, 6, 2, 3, 2, 1, 7, 5, 5, 7, 6, 3, 4, 2, 0, 1, 7, 7, 0, 5, 9, 3, 0, 6, 6, 1, 0, 2, 1, 6, 2, 4, 9, 8, 5, 4, 5,

Test	Expected	Got
9, 0, 7, 7, 8, 4, 3, 1, 9, 5, 2, 4, 1,	3, 2, 9, 9, 8, 4, 0, 0, 7, 3, 1, 2,	3, 2, 9, 9, 8, 4, 0, 0, 7, 3, 1, 2,
6, 5, 4, 7, 8, 4, 7, 5, 9, 6, 9, 4, 4,	0, 3, 8, 1, 2, 0, 6, 9, 0, 7, 7, 8,	0, 3, 8, 1, 2, 0, 6, 9, 0, 7, 7, 8,
8, 4, 7, 2, 7, 2, 4, 6, 1, 9, 1, 4, 5,	4, 3, 1, 9, 5, 2, 4, 1, 6, 5, 4, 7,	4, 3, 1, 9, 5, 2, 4, 1, 6, 5, 4, 7,
9, 3, 9, 5, 3, 3, 1, 9, 7, 9, 1, 1, 4,	8, 4, 7, 5, 9, 6, 9, 4, 4, 8, 4, 7,	8, 4, 7, 5, 9, 6, 9, 4, 4, 8, 4, 7,
4, 8, 7, 1, 6, 5, 5, 5, 2, 0, 3, 4, 8,	2, 7, 2, 4, 6, 1, 9, 1, 4, 5, 9, 3,	2, 7, 2, 4, 6, 1, 9, 1, 4, 5, 9, 3,
1, 8, 7, 1, 6, 0, 2, 5, 7, 8, 0, 2, 2,	9, 5, 3, 3, 1, 9, 7, 9, 1, 1, 4, 4,	9, 5, 3, 3, 1, 9, 7, 9, 1, 1, 4, 4,
5, 8, 0, 4, 3, 1, 8, 2, 2, 7, 9, 1, 0,	8, 7, 1, 6, 5, 5, 5, 2, 0, 3, 4, 8,	8, 7, 1, 6, 5, 5, 5, 2, 0, 3, 4, 8,
0, 9, 1, 7, 4, 6, 2, 5, 5, 9, 3, 2, 6,	1, 8, 7, 1, 6, 0, 2, 5, 7, 8, 0, 2,	1, 8, 7, 1, 6, 0, 2, 5, 7, 8, 0, 2,
6, 6, 7, 9, 0, 0, 1, 7, 5, 8, 9, 4, 1,	2, 5, 8, 0, 4, 3, 1, 8, 2, 2, 7, 9,	2, 5, 8, 0, 4, 3, 1, 8, 2, 2, 7, 9,
7, 0, 1, 2, 7, 5, 3, 7, 3, 9, 6, 4, 6,	1, 0, 0, 9, 1, 7, 4, 6, 2, 5, 5, 9,	1, 0, 0, 9, 1, 7, 4, 6, 2, 5, 5, 9,
	3, 2, 6, 6, 6, 7, 9, 0, 0, 1, 7, 5,	3, 2, 6, 6, 6, 7, 9, 0, 0, 1, 7, 5,
5, 5, 2, 1, 2, 6, 2, 1, 5, 5, 0, 0, 0,	8, 9, 4, 1, 7, 0, 1, 2, 7, 5, 3, 7,	8, 9, 4, 1, 7, 0, 1, 2, 7, 5, 3, 7,
8, 8, 8, 1, 5, 3, 7, 7, 9, 9, 4, 6, 7,	3, 9, 6, 4, 6, 8, 4, 0, 2, 4, 7, 9,	3, 9, 6, 4, 6, 8, 4, 0, 2, 4, 7, 9,
0, 2, 3, 7, 8, 8, 0, 9, 5, 9, 1, 0, 6,	0, 2, 0, 0, 0, 2, 5, 5, 2, 1, 2, 6,	0, 2, 0, 0, 0, 2, 5, 5, 2, 1, 2, 6,
1, 1, 5, 2, 8, 8, 3, 2, 7, 4, 2, 1, 2,	2, 1, 5, 5, 0, 0, 0, 8, 8, 8, 1, 5,	2, 1, 5, 5, 0, 0, 0, 8, 8, 8, 1, 5,
	3, 7, 7, 9, 9, 4, 6, 7, 0, 2, 3, 7,	3, 7, 7, 9, 9, 4, 6, 7, 0, 2, 3, 7,
9, 1, 1, 1, 4, 0, 8, 5, 0, 0, 3, 7, 5,	8, 8, 0, 9, 5, 9, 1, 0, 6, 1, 1, 5,	8, 8, 0, 9, 5, 9, 1, 0, 6, 1, 1, 5,
	2, 8, 8, 3, 2, 7, 4, 2, 1, 2, 9, 8,	2, 8, 8, 3, 2, 7, 4, 2, 1, 2, 9, 8,
9, 5, 8, 5, 7, 2, 2, 2, 8, 7, 3, 2, 2,	7, 7, 4, 5, 7, 7, 1, 4, 0, 5, 6, 9,	7, 7, 4, 5, 7, 7, 1, 4, 0, 5, 6, 9,
0, 5, 5, 1, 9, 5, 5, 5, 7, 0, 0, 9, 2,	1, 1, 1, 4, 0, 8, 5, 0, 0, 3, 7, 5,	1, 1, 1, 4, 0, 8, 5, 0, 0, 3, 7, 5,
9, 7, 4, 3, 9, 5, 6, 9, 5, 2, 4, 3, 8,	1, 0, 8, 6, 3, 4, 0, 1, 1, 8, 3, 8,	1, 0, 8, 6, 3, 4, 0, 1, 1, 8, 3, 8,
3, 0, 2, 6, 8, 9, 9, 8, 5, 0, 3, 1, 8,	6, 9, 5, 8, 5, 7, 2, 2, 2, 8, 7, 3,	6, 9, 5, 8, 5, 7, 2, 2, 2, 8, 7, 3,
2, 5, 1, 4, 2, 5, 4, 6, 0, 8, 0, 6, 8,	2, 2, 0, 5, 5, 1, 9, 5, 5, 5, 7, 0,	2, 2, 0, 5, 5, 1, 9, 5, 5, 5, 7, 0,
5, 8, 0, 6, 5, 0, 9, 4, 2, 4, 3, 7, 7,	0, 9, 2, 9, 7, 4, 3, 9, 5, 6, 9, 5,	0, 9, 2, 9, 7, 4, 3, 9, 5, 6, 9, 5,
8, 7, 8, 8, 5, 4, 7, 7, 2, 2, 9, 0, 5,	2, 4, 3, 8, 3, 0, 2, 6, 8, 9, 9, 8,	2, 4, 3, 8, 3, 0, 2, 6, 8, 9, 9, 8,
9, 0, 7, 4, 9, 7, 5, 3, 2, 3, 6, 2, 8,	5, 0, 3, 1, 8, 2, 5, 1, 4, 2, 5, 4,	5, 0, 3, 1, 8, 2, 5, 1, 4, 2, 5, 4,
3, 9, 6, 8, 4, 8, 6, 8, 7, 4, 3, 3, 7,	6, 0, 8, 0, 6, 8, 5, 8, 0, 6, 5, 0,	6, 0, 8, 0, 6, 8, 5, 8, 0, 6, 5, 0,
4, 6, 9, 9, 0, 1, 2, 7, 6, 7, 2, 1, 4,	9, 4, 2, 4, 3, 7, 7, 8, 7, 8, 8, 5,	9, 4, 2, 4, 3, 7, 7, 8, 7, 8, 8, 5,
0, 2, 7, 4, 1, 5, 3, 8, 3, 2, 6, 9, 8,	4, 7, 7, 2, 2, 9, 0, 5, 9, 0, 7, 4,	4, 7, 7, 2, 2, 9, 0, 5, 9, 0, 7, 4,
8, 9, 7, 1, 6, 9, 9, 6, 9, 4, 2, 1, 6,	9, 7, 5, 3, 2, 3, 6, 2, 8, 3, 9, 6,	9, 7, 5, 3, 2, 3, 6, 2, 8, 3, 9, 6,
2, 5, 4, 5, 9, 6, 2, 6, 3, 5, 6, 3, 6,	8, 4, 8, 6, 8, 7, 4, 3, 3, 7, 4, 6,	8, 4, 8, 6, 8, 7, 4, 3, 3, 7, 4, 6,
	9, 9, 0, 1, 2, 7, 6, 7, 2, 1, 4, 0,	9, 9, 0, 1, 2, 7, 6, 7, 2, 1, 4, 0,
4, 1, 2, 0, 2, 8, 3, 7, 1, 1, 2, 1, 9,	2, 7, 4, 1, 5, 3, 8, 3, 2, 6, 9, 8,	2, 7, 4, 1, 5, 3, 8, 3, 2, 6, 9, 8,
7, 5, 8, 9, 8, 8, 6, 5, 6, 2, 7, 7, 7,	8, 9, 7, 1, 6, 9, 9, 6, 9, 4, 2, 1,	8, 9, 7, 1, 6, 9, 9, 6, 9, 4, 2, 1,
5, 1, 8, 4, 6, 5, 7, 8, 7, 9, 7, 6, 9,	6, 2, 5, 4, 5, 9, 6, 2, 6, 3, 5, 6,	6, 2, 5, 4, 5, 9, 6, 2, 6, 3, 5, 6, 3, 6, 5, 1, 3, 4, 2, 9, 8, 5, 6, 8,
5, 8, 1, 8, 8, 1, 8, 4, 2, 1, 1, 1, 5,	3, 6, 5, 1, 3, 4, 2, 9, 8, 5, 6, 8,	
	6, 5, 8, 4, 1, 2, 0, 2, 8, 3, 7, 1,	6, 5, 8, 4, 1, 2, 0, 2, 8, 3, 7, 1,
	1, 2, 1, 9, 7, 5, 8, 9, 8, 8, 6, 5,	1, 2, 1, 9, 7, 5, 8, 9, 8, 8, 6, 5,
5, 5, 6, 9, 9, 7, 7, 7, 8, 6, 9, 4, 6,	6, 2, 7, 7, 7, 5, 1, 8, 4, 6, 5, 7,	6, 2, 7, 7, 7, 5, 1, 8, 4, 6, 5, 7,
	8, 7, 9, 7, 6, 9, 5, 8, 1, 8, 8, 1,	8, 7, 9, 7, 6, 9, 5, 8, 1, 8, 8, 1,
7, 0, 2, 1, 5, 9, 0, 7, 3, 2, 8, 9, 3,	8, 4, 2, 1, 1, 1, 5, 2, 4, 7, 5, 5,	8, 4, 2, 1, 1, 1, 5, 2, 4, 7, 5, 5,
4, 4, 6, 8, 7, 7, 1, 0, 7, 1, 8, 6, 7,	1, 3, 0, 4, 6, 4, 0, 0, 2, 7, 7, 7,	1, 3, 0, 4, 6, 4, 0, 0, 2, 7, 7, 7,
9, 9, 5, 2, 7, 2, 0, 3, 4, 5, 0, 7, 9,	2, 6, 7, 5, 4, 8, 8, 8, 5, 5, 5, 6,	2, 6, 7, 5, 4, 8, 8, 8, 5, 5, 5, 6,
6, 2, 3, 3, 9, 5, 9, 4, 1, 9, 9, 7, 5,	9, 9, 7, 7, 8, 6, 9, 4, 6, 3, 0,	9, 9, 7, 7, 8, 6, 9, 4, 6, 3, 0,
	4, 3, 3, 6, 2, 5, 8, 2, 1, 2, 9, 7,	4, 3, 3, 6, 2, 5, 8, 2, 1, 2, 9, 7,
8, 8, 1, 8, 9, 1, 1, 2, 1, 0, 5, 2, 0,	0, 2, 1, 5, 9, 0, 7, 3, 2, 8, 9, 3,	0, 2, 1, 5, 9, 0, 7, 3, 2, 8, 9, 3,
4, 8, 5, 9, 7, 5, 0, 8, 5, 8, 9, 3, 8,	4, 4, 6, 8, 7, 7, 1, 0, 7, 1, 8, 6,	4, 4, 6, 8, 7, 7, 1, 0, 7, 1, 8, 6,
9, 1, 8, 9, 3, 9, 6, 3, 3, 7, 0, 1, 3,	7, 9, 9, 5, 2, 7, 2, 0, 3, 4, 5, 0,	7, 9, 9, 5, 2, 7, 2, 0, 3, 4, 5, 0,
8, 4, 1, 9, 8, 6, 5, 6, 5, 2, 5, 1, 1,	7, 9, 6, 2, 3, 3, 9, 5, 9, 4, 1, 9,	7, 9, 6, 2, 3, 3, 9, 5, 9, 4, 1, 9,
2, 0, 9, 3, 9, 6, 2, 4, 0, 3, 1, 8, 6,	9, 7, 5, 1, 2, 7, 5, 4, 7, 1, 8, 1,	9, 7, 5, 1, 2, 7, 5, 4, 7, 1, 8, 1,
3, 7, 0, 9, 7, 4, 1, 4, 6, 4, 2, 1, 5,	2, 7, 8, 4, 8, 8, 1, 8, 9, 1, 1, 2,	2, 7, 8, 4, 8, 8, 1, 8, 9, 1, 1, 2,
1, 3, 8, 3, 5, 4, 8, 2, 0, 1, 0, 8, 4,	1, 0, 5, 2, 0, 4, 8, 5, 9, 7, 5, 0,	1, 0, 5, 2, 0, 4, 8, 5, 9, 7, 5, 0,
	8, 5, 8, 9, 3, 8, 9, 1, 8, 9, 3, 9,	8, 5, 8, 9, 3, 8, 9, 1, 8, 9, 3, 9,
6, 5, 4, 1, 5, 9, 3, 8, 1, 4, 8, 8, 8,	6, 3, 3, 7, 0, 1, 3, 8, 4, 1, 9, 8,	6, 3, 3, 7, 0, 1, 3, 8, 4, 1, 9, 8,
8, 5, 5, 5, 1, 2, 1, 3, 7, 8, 2, 2, 8,	6, 5, 6, 5, 2, 5, 1, 1, 2, 0, 9, 3,	6, 5, 6, 5, 2, 5, 1, 1, 2, 0, 9, 3,
0, 6, 1, 0, 7, 5, 9, 6, 9, 6, 2, 9, 8,	9, 6, 2, 4, 0, 3, 1, 8, 6, 3, 7, 0,	9, 6, 2, 4, 0, 3, 1, 8, 6, 3, 7, 0,
6, 8, 0, 2, 9, 3, 0, 8, 8, 6, 9, 4, 0,	9, 7, 4, 1, 4, 6, 4, 2, 1, 5, 1, 3,	9, 7, 4, 1, 4, 6, 4, 2, 1, 5, 1, 3,
	8, 3, 5, 4, 8, 2, 0, 1, 0, 8, 4, 1,	8, 3, 5, 4, 8, 2, 0, 1, 0, 8, 4, 1,
1, 6, 4, 9, 2, 7, 4, 6, 0, 1, 2, 6, 8,	2, 2, 7, 2, 2, 3, 1, 8, 2, 8, 2, 4,	2, 2, 7, 2, 2, 3, 1, 8, 2, 8, 2, 4,
0, 9, 8, 3, 0, 7, 3, 9, 7, 1, 6, 2, 2,	6, 5, 4, 1, 5, 9, 3, 8, 1, 4, 8, 8,	6, 5, 4, 1, 5, 9, 3, 8, 1, 4, 8, 8,
и , 5 х л I ч Л И Ч Ј 7 Q I	8, 8, 5, 5, 5, 1, 2, 1, 3, 7, 8, 2,	8, 8, 5, 5, 5, 1, 2, 1, 3, 7, 8, 2,
0, 7, 5, 3, 4, 1, 9, 4, 0, 9, 2, 7, 8,		) x 0 6 1 0 7 5 0 6 0 6
7, 1, 6, 2, 9, 8, 8, 1, 5, 3, 0, 4, 3,	2, 8, 0, 6, 1, 0, 7, 5, 9, 6, 9, 6,	2, 8, 0, 6, 1, 0, 7, 5, 9, 6, 9, 6,
7, 1, 6, 2, 9, 8, 8, 1, 5, 3, 0, 4, 3,	2, 8, 0, 6, 1, 0, 7, 5, 9, 6, 9, 6, 2, 9, 8, 6, 8, 0, 2, 9, 3, 0, 8, 8,	2, 9, 8, 6, 8, 0, 2, 9, 3, 0, 8, 8,
7, 1, 6, 2, 9, 8, 8, 1, 5, 3, 0, 4, 3, 0, 1, 6, 2, 5, 1, 9, 8, 4, 4, 9, 9, 0,		

Test	Expected	Got
8, 9, 0, 2, 7, 9, 5, 6, 2, 0, 4, 0, 4	6, 0, 1, 2, 6, 8, 0, 9, 8, 3, 0, 7,	6, 0, 1, 2, 6, 8, 0, 9, 8, 3, 0, 7,
2, 7, 1, 4, 3, 0, 7, 0, 2, 0, 9, 3, 9	3, 9, 7, 1, 6, 2, 2, 0, 7, 5, 3, 4,	3, 9, 7, 1, 6, 2, 2, 0, 7, 5, 3, 4,
5, 2, 2, 8, 4, 2, 0, 0, 5, 8, 7, 5, 3	1, 9, 4, 0, 9, 2, 7, 8, 7, 1, 6, 2,	1, 9, 4, 0, 9, 2, 7, 8, 7, 1, 6, 2,
6, 7, 7, 1, 5, 3, 3, 9, 4, 9, 1, 3, 8	9, 8, 8, 1, 5, 3, 0, 4, 3, 0, 1, 6,	9, 8, 8, 1, 5, 3, 0, 4, 3, 0, 1, 6,
5, 8, 1, 1, 9, 8, 1, 0, 4, 9, 4, 6, 5	2, 5, 1, 9, 8, 4, 4, 9, 9, 0, 5, 9,	2, 5, 1, 9, 8, 4, 4, 9, 9, 0, 5, 9,
4, 8, 4, 4, 4, 3, 1, 6, 5, 7, 5, 3, 4	0, 4, 1, 3, 8, 2, 1, 4, 1, 4, 8, 9,	0, 4, 1, 3, 8, 2, 1, 4, 1, 4, 8, 9,
2, 4, 9, 1, 1, 8, 4, 7, 4, 0, 6, 2, 2	2, 2, 9, 1, 1, 7, 3, 9, 6, 2, 6, 3,	2, 2, 9, 1, 1, 7, 3, 9, 6, 2, 6, 3,
, 0, 2, 8, 6, 7, 5, 6, 0, 4, 6, 1, 2	8, 9, 0, 2, 7, 9, 5, 6, 2, 0, 4, 0,	8, 9, 0, 2, 7, 9, 5, 6, 2, 0, 4, 0,
1, 3, 7, 4, 5, 3, 8, 3, 0, 3, 0, 5, 2	4, 2, 7, 1, 4, 3, 0, 7, 0, 2, 0, 9,	4, 2, 7, 1, 4, 3, 0, 7, 0, 2, 0, 9,
0, 9, 7, 3, 0, 5, 1, 8, 5, 2, 9, 7, 4	3, 9, 5, 2, 2, 8, 4, 2, 0, 0, 5, 8,	3, 9, 5, 2, 2, 8, 4, 2, 0, 0, 5, 8,
0, 9, 8, 5, 1, 0, 8, 1, 8, 1, 3, 9, 1		7, 5, 3, 6, 7, 7, 1, 5, 3, 3, 9, 4,
8, 7, 2, 6, 0, 9, 0, 5, 2, 3, 6, 0, 6		9, 1, 3, 8, 5, 8, 1, 1, 9, 8, 1, 0,
0, 6, 6, 8, 7, 3, 6, 3, 8, 3, 0, 4, 6		4, 9, 4, 6, 5, 4, 8, 4, 4, 4, 3, 1,
5, 6, 4, 3, 4, 7,snip, 7, 9,	6, 5, 7, 5, 3, 4, 2, 4, 9, 1, 1, 8,	6, 5, 7, 5, 3, 4, 2, 4, 9, 1, 1, 8,
4, 4, 8, 0, 3, 8, 2, 8, 0, 0, 0, 5, 3	4, 7, 4, 0, 6, 2, 2, 0, 0, 2, 8, 6,	4, 7, 4, 0, 6, 2, 2, 0, 0, 2, 8, 6,
1, 1, 5, 7, 4, 7, 4, 6, 2, 2, 3, 4, 5	7, 5, 6, 0, 4, 6, 1, 2, 1, 3, 7, 4,	7, 5, 6, 0, 4, 6, 1, 2, 1, 3, 7, 4,
7, 2, 8, 2, 6, 2, 7, 9, 8, 1, 0, 7, 0	5, 3, 8, 3, 0, 3, 0, 5, 2, 0, 9, 7,	5, 3, 8, 3, 0, 3, 0, 5, 2, 0, 9, 7,
8, 1, 4, 1, 3, 1, 5, 7, 0, 5, 2, 7, 1	3, 0, 5, 1, 8, 5, 2, 9, 7, 4, 0, 9,	3, 0, 5, 1, 8, 5, 2, 9, 7, 4, 0, 9,
6, 9, 6, 6, 9, 6, 0, 3, 2, 3, 9, 1, 6	8, 5, 1, 0, 8, 1, 8, 1, 3, 9, 1, 8,	8, 5, 1, 0, 8, 1, 8, 1, 3, 9, 1, 8,
0, 7, 1, 9, 4, 6, 1, 7, 3, 8, 0, 0, 9	7, 2, 6, 0, 9, 0, 5, 2, 3, 6, 0, 6,	7, 2, 6, 0, 9, 0, 5, 2, 3, 6, 0, 6,
6, 8, 3, 2, 5, 5, 1, 9, 2, 8, 7, 0, 8	0, 6, 6, 8, 7, 3, 6, 3, 8, 3, 0, 4,	0, 6, 6, 8, 7, 3, 6, 3, 8, 3, 0, 4,
7, 2, 3, 7, 2, 9, 9, 7, 5, 1, 9, 4, 3	6, 5, 6, 4, 3, 4, 7, 8, 7, 8, 4,	6, 5, 6, 4, 3, 4, 7, 8, 7, 8, 4,
6, 5, 2, 1, 0, 0, 7, 0, 5, 4, 4, 5, 1	snip 1, 9, 1, 5, 1, 5, 0, 2,	snip 1, 9, 1, 5, 1, 5, 0, 2,
7, 7, 7, 8, 8, 0, 3, 8, 6, 1, 8, 4, 8	9, 5, 1, 7, 0, 2, 5, 3, 7, 9, 9, 6,	9, 5, 1, 7, 0, 2, 5, 3, 7, 9, 9, 6,
9, 7, 7, 1, 9, 5, 8, 3, 4, 8, 5, 1, 8	9, 5, 9, 3, 7, 3, 0, 4, 5, 7, 7, 0,	9, 5, 9, 3, 7, 3, 0, 4, 5, 7, 7, 0,
5, 9, 4, 5, 8, 0, 6, 6, 7, 4, 8, 7, 5	9, 4, 2, 2, 3, 5, 3, 5, 7, 1, 0, 1,	9, 4, 2, 2, 3, 5, 3, 5, 7, 1, 0, 1,
6, 4, 0, 6, 2, 3, 5, 0, 8, 5, 9, 4, 3	1, 2, 6, 9, 5, 2, 0, 6, 3, 5, 4, 3,	1, 2, 6, 9, 5, 2, 0, 6, 3, 5, 4, 3,
1, 1, 5, 9, 3, 4, 5, 2, 5, 9, 7, 8, 2	0, 6, 1, 4, 8, 7, 5, 3, 6, 1, 0, 4,	0, 6, 1, 4, 8, 7, 5, 3, 6, 1, 0, 4,
2, 7, 9, 4, 8, 0, 6, 3, 7, 6, 3, 7, 7	8, 7, 5, 1, 4, 6, 1, 0, 0, 2, 1, 9,	8, 7, 5, 1, 4, 6, 1, 0, 0, 2, 1, 9,
5, 1, 3, 1, 4, 3, 0, 7, 3, 8, 0, 4, 6	2, 3, 3, 5, 6, 8, 0, 3, 1, 1, 0, 6,	2, 3, 3, 5, 6, 8, 0, 3, 1, 1, 0, 6,
6, 1, 6, 2, 6, 9, 0, 1, 3, 7, 0, 3, 2		8, 9, 4, 8, 0, 5, 1, 0, 4, 0, 5, 6,
8, 6, 3, 2, 5, 8, 8, 2, 5, 1, 2, 2, 6	3, 6, 6, 1, 3, 5, 0, 0, 7, 9, 1, 7,	3, 6, 6, 1, 3, 5, 0, 0, 7, 9, 1, 7,
3, 5, 9, 4, 9, 1, 3, 8, 3, 5, 2, 5, 1		9, 1, 7, 3, 3, 4, 0, 2, 5, 0, 8, 7,
6, 7, 7, 3, 8, 7, 4, 6, 9, 6, 3, 3, 9		3, 9, 4, 9, 7, 7, 9, 0, 2, 1, 6, 8,
6, 6, 0, 7, 6, 1, 2, 2, 2, 6, 0, 3, 5	2, 0, 7, 9, 9, 4, 2, 2, 8, 8, 1, 7,	2, 0, 7, 9, 9, 4, 2, 2, 8, 8, 1, 7,
9, 6, 1, 3, 9, 8, 7, 2, 8, 0, 9, 3, 5		9, 7, 8, 7, 7, 6, 7, 2, 9, 4, 6, 2,
2, 7, 9, 3, 5, 5, 3, 8, 7, 1, 4, 0, 3	5, 1, 7, 3, 3, 1, 7, 5, 4, 9, 9, 4,	5, 1, 7, 3, 3, 1, 7, 5, 4, 9, 9, 4,
2, 8, 0, 4, 4, 8, 0, 7, 7, 2, 3, 1, 4	0, 4, 7, 4, 3, 5, 2, 9, 7, 5, 6, 9,	0, 4, 7, 4, 3, 5, 2, 9, 7, 5, 6, 9,
8, 5, 5, 3, 2, 9, 3, 6, 9, 3, 1, 5, 5		2, 0, 1, 9, 7, 2, 5, 0, 6, 2, 6, 4,
5, 1, 6, 0, 5, 5, 9, 8, 0, 6, 9, 8, 6		1, 5, 1, 7, 9, 0, 5, 2, 4, 1, 3, 9,
7, 5, 5, 7, 1, 2, 8, 2, 7, 2, 4, 9, 7		7, 2, 4, 0, 9, 2, 6, 6, 2, 9, 1, 1,
0, 9, 8, 7, 2, 2, 0, 5, 5, 8, 4, 9, 1		3, 4, 4, 9, 0, 5, 1, 7, 7, 4, 5, 0,
6, 7, 8, 3, 3, 7, 3, 6, 2, 2, 2, 8, 4		5, 4, 7, 1, 9, 1, 0, 5, 6, 3, 4, 2,
0, 6, 4, 7, 5, 4, 5, 4, 6, 5, 7, 8, 7		0, 1, 6, 6, 5, 4, 0, 0, 7, 8, 3, 4,
8, 1, 6, 0, 4, 4, 8, 9, 1, 2, 2, 3, 8		3, 7, 1, 3, 1, 9, 0, 4, 3, 5, 0, 9,
9, 9, 4, 0, 1, 4, 3, 5, 7, 3, 1, 4, 6		7, 9, 3, 0, 2, 9, 3, 0, 8, 0, 0, 5,
4, 9, 3, 2, 1, 0, 1, 5, 0, 7, 2, 2, 1		2, 8, 5, 8, 0, 6, 3, 8, 7, 3, 6, 2,
7, 1, 6, 7, 5, 5, 8, 0, 6, 2, 3, 0, 7		3, 7, 8, 5, 5, 4, 9, 5, 5, 3, 7, 7,
5, 8, 6, 6, 7, 9, 0, 8, 6, 3, 3, 2, 4		0, 0, 0, 0, 5, 4, 6, 1, 2, 3, 2, 2,
8, 6, 3, 4, 1, 2, 1, 0, 6, 1, 9, 6, 0		9, 1, 1, 5, 9, 8, 8, 9, 9, 4, 4, 1,
7, 0, 3, 6, 4, 5, 7, 9, 8, 6, 6, 6, 8		8, 2, 9, 9, 0, 8, 0, 2, 2, 3, 9, 3,
7, 3, 9, 6, 3, 4, 8, 8, 3, 0, 3, 3, 7		3, 0, 1, 4, 7, 6, 6, 0, 6, 4, 1, 2,
3, 7, 6, 0, 1, 4, 4, 2, 1, 1, 2, 7, 0		8, 7, 9, 2, 7, 0, 7, 9, 8, 0, 8, 7,
5, 6, 9, 1, 9, 4, 5, 1, 7, 0, 2, 6, 9		4, 4, 2, 3, 5, 0, 2, 7, 9, 5, 8, 5,
2, 0, 0, 6, 5, 8, 3, 4, 1, 8, 3, 4, 6		9, 9, 1, 1, 7, 7, 6, 3, 6, 3, 1, 3,
7, 4, 9, 1, 4, 4, 1, 8, 0, 7, 3, 2, 0		9, 8, 5, 6, 1, 3, 6, 1, 1, 7, 0, 4,
1, 6, 6, 9, 1, 4, 5, 6, 1, 7, 0, 6, 8		5, 7, 6, 2, 8, 8, 2, 7, 7, 1, 4, 4,
0, 2, 9, 0, 3, 3, 9, 3, 9, 5, 8, 6, 9		3, 7, 9, 0, 1, 6, 0, 3, 1, 2, 6, 8,
1, 2, 6, 1, 8, 8, 9, 6, 4, 6, 8, 2, 9		2, 2, 1, 1, 0, 6, 9, 1, 4, 7, 4, 3,
3, 0, 5, 4, 8, 6, 3, 0, 2, 7, 9, 9, 9		4, 6, 1, 6, 5, 8, 4, 1, 2, 8, 5, 7, 6, 7, 8, 5, 5, 7, 5, 4, 1, 4, 1, 8
	6, 7, 8, 5, 5, 7, 5, 4, 1, 4, 1, 8,	6, 7, 8, 5, 5, 7, 5, 4, 1, 4, 1, 8,
4, 1, 7, 1, 0, 8, 0, 1, 4, 1, 6, 8, 5	E 0 0 2 1 1 7 2 2 4 C 2	
3, 4, 2, 6, 9, 3, 3, 7, 7, 1, 0, 2, 5		5, 8, 0, 2, 1, 1, 7, 2, 3, 4, 6, 3,
3, 4, 2, 6, 9, 3, 3, 7, 7, 1, 0, 2, 5 9, 7, 5, 5, 8, 3, 2, 1, 0, 6, 5, 5, 9	3, 5, 5, 5, 4, 1, 2, 3, 1, 6, 5, 5,	3, 5, 5, 5, 4, 1, 2, 3, 1, 6, 5, 5,
3, 4, 2, 6, 9, 3, 3, 7, 7, 1, 0, 2, 5	3, 5, 5, 5, 4, 1, 2, 3, 1, 6, 5, 5, 9, 6, 9, 0, 1, 5, 6, 8, 8, 5, 5, 9,	

Test	Expected Got		
5, 8, 3, 7, 8, 0, 6, 5, 3, 5, 9, 6, 8,	1, 0, 2, 2, 6, 7, 9, 0, 7, 0, 5, 0,	1, 0, 2, 2, 6, 7, 9, 0, 7, 0, 5, 0,	
6, 6, 0, 6, 3, 8, 0, 3, 4, 9, 7, 0, 9,	4, 0, 1, 4, 0, 1, 0, 9, 9, 9, 1, 9,	4, 0, 1, 4, 0, 1, 0, 9, 9, 9, 1, 9,	
0, 4, 6, 3, 6, 1, 1, 5, 8, 7, 8, 2, 1,	7, 1, 5, 9, 2, 9, 9, 7, 0, 6, 0, 5,	7, 1, 5, 9, 2, 9, 9, 7, 0, 6, 0, 5,	
1, 2, 7, 1, 2, 8, 7, 5, 1, 7, 9, 3, 7,	5, 9, 7, 6, 4, 0, 4, 4, 4, 1, 5, 6,	5, 9, 7, 6, 4, 0, 4, 4, 4, 1, 5, 6,	
0, 0, 3, 8, 0, 7, 9, 6, 8, 7, 4, 0, 3,	9, 3, 1, 8, 3, 0, 0, 4, 5, 6, 3, 6,	9, 3, 1, 8, 3, 0, 0, 4, 5, 6, 3, 6,	
0, 5, 8, 6, 4, 2, 0, 0, 8, 0, 7, 8, 0,	9, 2, 1, 0, 4, 6, 3, 6, 5, 9, 0, 5,	9, 2, 1, 0, 4, 6, 3, 6, 5, 9, 0, 5,	
2, 7, 8, 4, 0, 6, 5, 9, 2, 2, 8, 4, 5,	5, 8, 4, 0, 2, 4, 3, 5, 2, 9, 3, 9,	5, 8, 4, 0, 2, 4, 3, 5, 2, 9, 3, 9,	
6, 0, 1, 5, 2, 6, 2, 3, 4, 2, 6, 7, 1,	9, 6, 4, 1, 1, 2, 9, 1, 8, 4, 3, 9,	9, 6, 4, 1, 1, 2, 9, 1, 8, 4, 3, 9,	
1, 2, 7, 2, 3, 9, 2, 2, 2, 1, 6, 5, 0,	7, 6, 9, 4, 3, 5, 3, 7, 0, 7, 7, 9,	7, 6, 9, 4, 3, 5, 3, 7, 0, 7, 7, 9,	
0, 8, 2, 1, 8, 9, 8, 5, 1, 2, 0, 7, 1,	4, 8, 7, 5, 7, 2, 6, 1, 6, 6, 2, 2,	4, 8, 7, 5, 7, 2, 6, 1, 6, 6, 2, 2,	
7, 4, 3, 7, 7, 2, 6, 7, 2, 4, 4, 9, 3,	2, 6, 4, 5, 1, 4, 5, 6, 5, 7, 5, 5,	2, 6, 4, 5, 1, 4, 5, 6, 5, 7, 5, 5,	
9, 5, 3, 0, 0, 2, 7, 4, 9, 3, 9, 9, 6,	9, 7, 8, 6, 1, 1, 8, 1, 2, 8, 9, 4,	9, 7, 8, 6, 1, 1, 8, 1, 2, 8, 9, 4,	
2, 8, 0, 4, 9, 6, 3, 0, 2, 5, 2, 2, 6,		8, 3, 0, 6, 9, 1, 6, 7, 7, 1, 6, 6,	
3, 6, 0, 3, 4, 3, 9, 0, 6, 4, 3, 0, 3,		6, 7, 4, 3, 2, 9, 2, 5, 5, 8, 9, 4,	
5, 8, 9, 5, 6, 5, 1, 7, 0, 1, 0, 9, 7,		7, 5, 0, 1, 9, 2, 0, 0, 8, 9, 0, 8,	
	7, 8, 3, 6, 6, 2, 6, 5, 2, 0, 5, 6,	7, 8, 3, 6, 6, 2, 6, 5, 2, 0, 5, 6,	
	1, 9, 2, 1, 7, 2, 7, 1, 6, 5, 4, 3,	1, 9, 2, 1, 7, 2, 7, 1, 6, 5, 4, 3,	
	1, 0, 3, 4, 1, 1, 3, 4, 9, 8, 1, 6,	1, 0, 3, 4, 1, 1, 3, 4, 9, 8, 1, 6,	
	9, 4, 7, 1, 8, 4, 4, 9, 4, 3, 4, 0,	9, 4, 7, 1, 8, 4, 4, 9, 4, 3, 4, 0,	
3, 2, 0, 1, 8, 1, 9, 4, 6, 2, 3, 6, 5,		6, 0, 5, 9, 4, 4, 2, 8, 4, 3, 5, 8,	
8, 3, 5, 8, 3, 3, 1, 9, 0, 9, 1, 6, 1,		7, 4, 1, 7, 4, 6, 3, 1, 5, 6, 4, 2,	
	6, 4, 6, 1, 1, 2, 3, 4, 5, 6, 5, 3,	6, 4, 6, 1, 1, 2, 3, 4, 5, 6, 5, 3,	
4, 8, 4, 8, 5, 4, 4, 5, 9, 6, 3, 6, 1, 0, 7, 2, 8, 2, 9, 8, 7, 9, 1, 8, 4, 7,	8, 1, 8, 8, 9, 5, 4, 3, 3, 5, 4, 3, 7, 7, 0, 2, 8, 2, 5, 0, 4, 1, 6, 0.	8, 1, 8, 8, 9, 5, 4, 3, 3, 5, 4, 3, 7, 7, 0, 2, 8, 2, 5, 0, 4, 1, 6, 0,	
5, 2, 1, 4, 4, 3, 2, 3, 8, 3, 0, 5, 1,		9, 5, 5, 6, 3, 8, 4, 9, 8, 8, 0, 9,	
	6, 3, 8, 8, 2, 4, 1, 5, 2, 1, 2, 3,	6, 3, 8, 8, 2, 4, 1, 5, 2, 1, 2, 3,	
	4, 1, 2, 9, 4, 8, 6, 6, 9, 9, 0, 8,	4, 1, 2, 9, 4, 8, 6, 6, 9, 9, 0, 8,	
	5, 8, 5, 0, 2, 4, 8, 8, 6, 4, 9, 5,	5, 8, 5, 0, 2, 4, 8, 8, 6, 4, 9, 5,	
9, 4, 2, 5, 0, 9, 9, 5, 0, 7, 9, 2,		5, 8, 9, 1, 5, 7, 8, 5, 5, 4, 0, 3,	
	3, 2, 2, 3, 5, 1, 1, 6, 4, 4, 9, 3,	3, 2, 2, 3, 5, 1, 1, 6, 4, 4, 9, 3,	
0, 7, 0, 7, 8, 7, 0, 2, 8, 6, 0, 4, 8,		7, 3, 6, 0, 9, 3, 3, 4, 4, 7, 9, 9,	
	8, 0, 1, 2, 4, 6, 6, 1, 9, 7, 5, 3,	8, 0, 1, 2, 4, 6, 6, 1, 9, 7, 5, 3,	
7, 9, 8, 1, 2, 4, 5, 4, 5, 6, 7, 6, 2,	1, 6, 3, 6, 3, 3, 8, 1, 3, 4, 7, 9,	1, 6, 3, 6, 3, 3, 8, 1, 3, 4, 7, 9,	
0, 2, 5, 9, 5, 0, 5, 4, 3, 6, 2, 5, 0,	7, 3, 4, 3, 7, 1, 4, 9, 8, 3, 6, 2,	7, 3, 4, 3, 7, 1, 4, 9, 8, 3, 6, 2,	
4, 5, 9, 7, 4, 4, 5, 0, 3, 7, 5, 4, 5,	2, 8, 9, 5, 6, 6, 6, 2, 2, 9, 5, 8,	2, 8, 9, 5, 6, 6, 6, 2, 2, 9, 5, 8,	
0, 0, 5, 2, 0, 8, 0, 3, 5, 2, 9, 8, 5,	3, 2, 0, 9, 1, 9, 4, 4, 1, 7, 6, 4,	3, 2, 0, 9, 1, 9, 4, 4, 1, 7, 6, 4,	
6, 3, 0, 3, 5, 6, 2, 2, 8, 1, 4, 9, 8,	0, 1, 4, 3, 8, 7, 1, 4, 1, 4, 1, 0,	0, 1, 4, 3, 8, 7, 1, 4, 1, 4, 1, 0,	
8, 7, 7, 1, 4, 8, 2, 1, 3, 9, 8, 8, 0,	1, 0, 4, 6, 0, 8, 6, 0, 5, 8, 8, 9,	1, 0, 4, 6, 0, 8, 6, 0, 5, 8, 8, 9,	
5, 0, 5, 2, 4, 0, 4, 6, 0, 8, 5, 7, 2,		9, 7, 6, 7, 5, 8, 3, 2, 3, 2, 7, 3,	
9, 6, 4, 2, 0, 0, 7, 7, 1, 2, 4, 4, 3,	8, 3, 6, 2, 3, 3, 1, 4, 3, 4, 1, 5,	8, 3, 6, 2, 3, 3, 1, 4, 3, 4, 1, 5,	
	5, 8, 0, 2, 1, 5, 7, 0, 7, 1, 9, 2,	5, 8, 0, 2, 1, 5, 7, 0, 7, 1, 9, 2,	
	6, 6, 7, 6, 9, 0, 6, 3, 0, 0, 8, 1,	6, 6, 7, 6, 9, 0, 6, 3, 0, 0, 8, 1,	
	2, 5, 4, 2, 6, 5, 3, 8, 5, 8, 3, 0,	2, 5, 4, 2, 6, 5, 3, 8, 5, 8, 3, 0, 9, 8, 0, 1, 4, 4, 7, 9, 4, 2, 9, 6,	
	9, 8, 0, 1, 4, 4, 7, 9, 4, 2, 9, 6, 2, 3, 4, 4, 4, 5, 0, 1, 7, 9, 2, 6,	2, 3, 4, 4, 4, 5, 0, 1, 7, 9, 2, 6,	
	0, 4, 2, 5, 1, 3, 6, 9, 6, 8, 9, 0,	0, 4, 2, 5, 1, 3, 6, 9, 6, 8, 9, 0,	
	2, 5, 5, 8, 3, 2, 4, 9, 2, 4, 6, 8,	2, 5, 5, 8, 3, 2, 4, 9, 2, 4, 6, 8,	
•	1, 9, 4, 9, 5, 5, 7, 4, 3, 2, 4, 1,	1, 9, 4, 9, 5, 5, 7, 4, 3, 2, 4, 1,	
	8, 0, 2, 3, 8, 0, 1, 6, 3, 6, 2, 5,	8, 0, 2, 3, 8, 0, 1, 6, 3, 6, 2, 5,	
	6, 0, 3, 1, 7, 7, 4, 6, 5, 6, 3, 7,	6, 0, 3, 1, 7, 7, 4, 6, 5, 6, 3, 7,	
	1, 4, 0, 9, 3, 2, 7, 3, 1, 2, 3, 7,	1, 4, 0, 9, 3, 2, 7, 3, 1, 2, 3, 7,	
	9, 5, 4, 1, 6, 6, 5, 6, 7, 7, 2, 4,	9, 5, 4, 1, 6, 6, 5, 6, 7, 7, 2, 4,	
·	6, 9, 8, 1, 6, 3, 8, 5, 2, 9, 8, 5,	6, 9, 8, 1, 6, 3, 8, 5, 2, 9, 8, 5,	
	8, 5, 7, 1, 5, 0, 0, 8, 2, 1, 9, 7,	8, 5, 7, 1, 5, 0, 0, 8, 2, 1, 9, 7,	
	2, 9, 3, 7, 6, 2, 5, 2, 7, 3, 4, 3,	2, 9, 3, 7, 6, 2, 5, 2, 7, 3, 4, 3,	
	7, 5, 3, 9, 9, 9, 3, 7, 6, 5, 6, 9,	7, 5, 3, 9, 9, 9, 3, 7, 6, 5, 6, 9,	
	9, 2, 0, 8, 1, 9, 1, 8, 8, 8, 6, 9,	9, 2, 0, 8, 1, 9, 1, 8, 8, 8, 6, 9,	
	2, 3, 3, 5, 2, 8, 0, 0, 3, 5, 5, 1,	2, 3, 3, 5, 2, 8, 0, 0, 3, 5, 5, 1,	
	3, 3, 2, 1, 7, 7, 2, 2, 0, 5, 9, 5,	3, 3, 2, 1, 7, 7, 2, 2, 0, 5, 9, 5,	
	6, 7, 8, 5, 9, 5, 8, 6, 7, 0, 9, 9,	6, 7, 8, 5, 9, 5, 8, 6, 7, 0, 9, 9,	
	6, 3, 8, 1, 4, 8, 7, 2, 1, 1, 2, 0,	6, 3, 8, 1, 4, 8, 7, 2, 1, 1, 2, 0,	
	3, 6, 7, 3, 5, 9, 2, 2, 2, 2, 7, 8,	3, 6, 7, 3, 5, 9, 2, 2, 2, 2, 7, 8,	
	2, 5, 8, 8, 7, 0, 0, 3, 4, 1, 5, 9,	2, 5, 8, 8, 7, 0, 0, 3, 4, 1, 5, 9,	
	6, 3, 7, 6, 6, 8, 1, 8, 0, 3, 1, 2,	6, 3, 7, 6, 6, 8, 1, 8, 0, 3, 1, 2	

Test	Expected	Got	
	3, 3, 8, 3, 4, 7, 6, 0, 3, 3, 4, 8,	3, 3, 8, 3, 4, 7, 6, 0, 3, 3, 4, 8,	
	4, 0, 8, 1, 1, 3, 4, 8, 4, 3, 1, 5,	4, 0, 8, 1, 1, 3, 4, 8, 4, 3, 1, 5,	
	2, 2, 4, 0, 2, 9, 5, 7, 7, 2, 1, 0,	2, 2, 4, 0, 2, 9, 5, 7, 7, 2, 1, 0,	
	6, 9, 6]	6, 9, 6]	

Passed all tests! ✓

Chính xác

Điểm cho bài nộp này: 1,00/1,00.

# Câu hỏi 14

Chính xác

Điểm 1.00 của 1.00

- Class LinkedList is used to represent single linked list, described as the following:

```
class LinkedList {
    public:
        class Node;
    private:
        Node* head;
        Node* tail;
        int size;
    public:
        class Node {
            private:
                int value;
                Node* next;
                friend class LinkedList;
            public:
                Node() {
                     this->next = NULL;
                }
                Node(Node* node) {
                     this->value = node->value;
                     this->next = node->next;
                }
                Node(int value, Node* next = NULL) {
                    this->value = value;
                     this->next = next;
                }
        };
        LinkedList(): head(NULL), tail(NULL), size(0) {};
        void replace(LinkedList* linked_list, int low, int high);
};
```

- In this class; head, tail and size are the pointers of the first element, the last element and size of linked list.
- Request: Implement function 'replace(LinkedList\* linked\_list, int low, int high)' (low <= high and high >= 0) to delete all elements from position low to position high in the linked list (head's position is 0). After that, add linked\_list to this linked list in the position after position (low 1) (if low 1 < 0, the head of this linked list will become the head of linked list.

(If high >= size, delete all elements from low position to the last position of this linked list. If low < 0, delete all elements from the first position of this linked list to high position)

- Example:
- + The given linked list: 10->20->30->40->50
- + The linked list: 55->45->42
- + low=1, high=3

In this case, delete all elements from position 1 (value 20) to position 3 (value 40). After that, add linked\_list to this linked list to the position after position 0 (value 10), therefore, this linked list will become: 10->55->42->50.

Note: In this exercise, library 'iostream' and 'sstream' and 'using namespace std;' has been used. You can add other functions, however, you are not allowed to add other libraries.

### For example:

Test	Result	
------	--------	--

Test	Result
LinkedList* 11 = new LinkedList(); LinkedList* 12 = new LinkedList(); 11->add(10); 11->add(20); 11->add(30); 11->add(40); 11->add(50); 12->add(55); 12->add(45); 12->add(42); 11->replace(12, -1, 2); cout << 11->toString() << "\n";	[55,45,42,40,50]

Answer: (penalty regime: 0 %)

Reset answer

```
void LinkedList::replace(LinkedList* linked_list, int low, int high) {
 2
        Node* temp = head;
 3
        Node* hold = nullptr;
 4
 5
        if (low < 0) {</pre>
 6
            low = 0;
 7
 8 •
        if (high >= size) {
            high = size-1;
 9
10
11 •
        for (int i = 0; i < low; i++) {</pre>
12
             if (i == (low - 1)) { hold = temp; }// giữ lại để lát nối với chuỗi
13
            temp = temp->next;
14
        Node* delete_node = temp;//delete các node
15
        //cout << high << endl;</pre>
16
17
        for (int i = low; i <= high; i++) {</pre>
18
             //cout << i << endl;
            temp = temp->next;//dời note trc khi xóa
19
20
            delete delete_node;
21
            delete_node = temp;
22
        if (linked_list != nullptr&&linked_list->head!=nullptr) {
23
             if (hold != nullptr)hold->next = linked_list->head;//nói chuỗi
24
            else head = linked_list->head;//nếu ko có hold tức là xóa từ head trở đi nên ta sẽ cho head=linked_l:
25
            linked list->tail->next = temp;//nối phần đuôi linked list với phần còn lại node
26
27
            if(linked_list->tail->next==nullptr){
28
                 tail=linked_list->tail;//update cái tail
29
            }
30 ▼
            else{
31 •
                 while(temp->next!=nullptr){
32
                     temp=temp->next;
33
34
                 tail=temp;//update cái tail
35
            }
        }
36
37 ▼
        else {//nếu linked list là nullptr hoặc linked head là nullptr thì chạy phần này
38
             if (hold != nullptr) hold->next = temp;
39
            else head = temp;
40
        }
41
```

	Test	Expected	Got	
~	LinkedList* 11 = new LinkedList(); LinkedList* 12 = new LinkedList(); 11->add(10); 11->add(20); 11->add(30); 11->add(40); 11->add(50); 12->add(55); 12->add(45); 12->add(42); 11->replace(12, -1, 2); cout << 11->toString() << "\n";	[55,45,42,40,50]	[55,45,42,40,50]	~

Passed all tests! 🗸



Điểm cho bài nộp này: 1,00/1,00.

### **BÁCH KHOA E-LEARNING**



### WEBSITE

**HCMUT** 

MyBK

BKSI

### LIÊN HỆ

- ♀ 268 Lý Thường Kiệt, P.14, Q.10, TP.HCM
- (028) 38 651 670 (028) 38 647 256 (Ext: 5258, 5234)
- elearning@hcmut.edu.vn

Copyright 2007-2022 BKEL - Phát triển dựa trên Moodle