1)

a. public Digits(int num) {

this.digitList = new ArrayList<Integer>();

if (num == 0) {

this.digitList.add(0);

return;

}

while (num > 0) {

this.digitList.add(0, num % 10);

num /= 10;

}

}

b.

public boolean isStrictlyIncreasing() {

for (int i=0; i<this.digitList.size()-1; i++) {

if (this.digitList.get(i) >= this.digitList.get(i+1)) {

return false;

}

}

return true;

}

3)

a.

public void replaceNthOccurrence(String str, int n, String repl) {

int loc = findNthOccurrence(str, n);

if (loc == -1) {

return;

}

String start = str.substring(0,loc);

String end = str.substring(loc + str.length);

return start + repl + end;

}

b.

public int findLastOccurrence(String str) {

int index = findNthOccurrence(str, 1);

if (index == -1) {

}

int counter = 2;

int lastIndex = index;

while (index != -1) {

lastIndex = index;

index = findNthOccurrence(str, counter ++);

}

return lastIndex;

}