#include <bits/stdc++.h>

using namespace std;

int main() {

// your code goes here

int t;

cin>>t;

while(t--)

{

int len=0;

string s;

cin>>s;

len = s.length() ;

if(len>10)

{

cout<<s[0];

cout<<len-2;

cout<<s[len-1];

cout<<endl;

}

else

cout<<s<<endl;

}

return 0;

}