ll mod(string sh,ll to\_mod){

ll to\_return=0;

ll i=1;

reverse(sh.begin(),sh.end());

for(int j=0;j<sh.size();j++){

//cout << i << endl;

switch(sh[j]){

case '1':

{to\_return+=i;

break;}

case '2':

{ to\_return+=i\*2;

break;}

to\_return=to\_return%to\_mod;

i\*=10;

i%=to\_mod;

}

return to\_return%to\_mod;

}