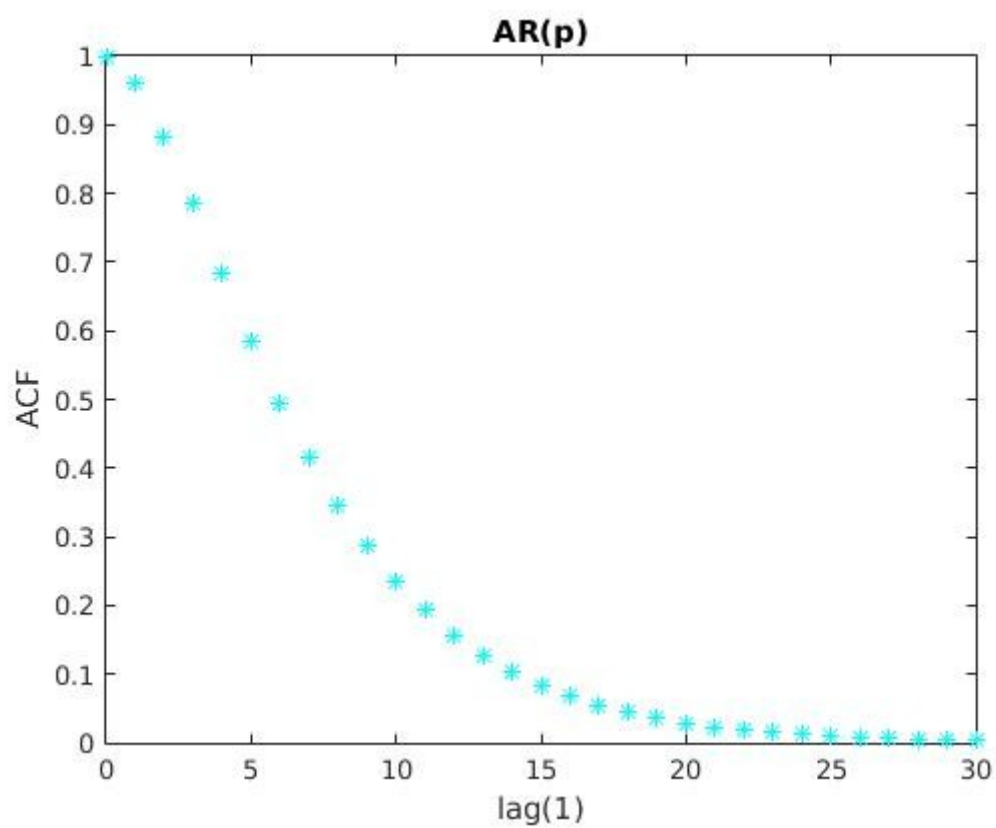
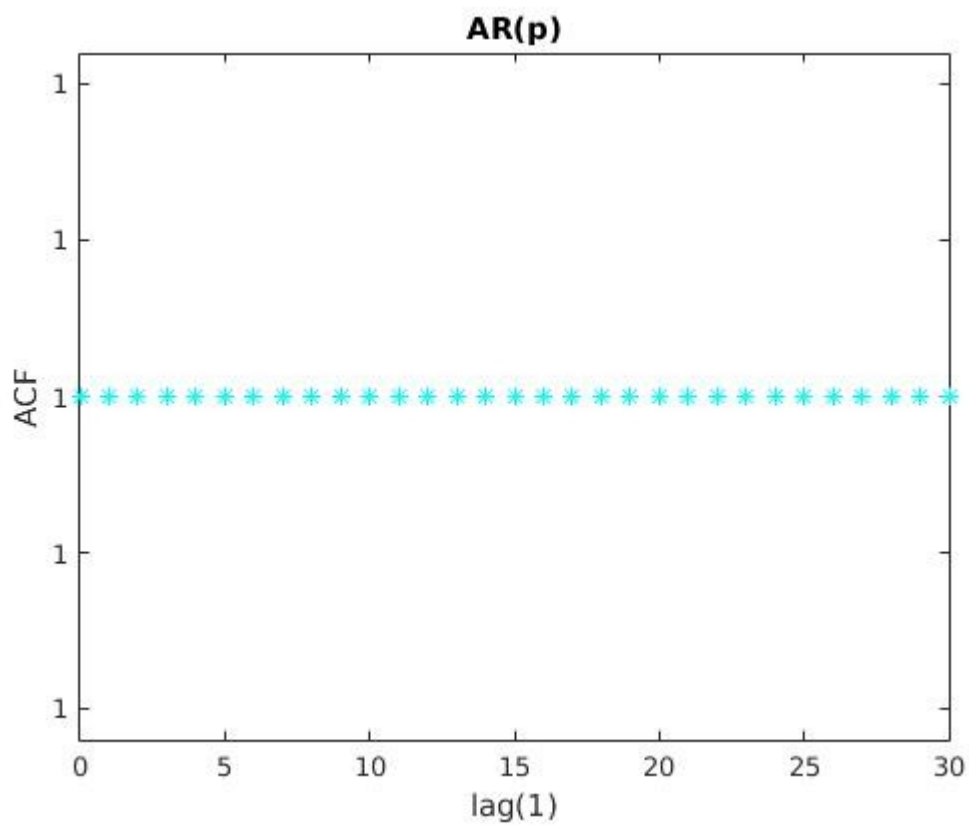


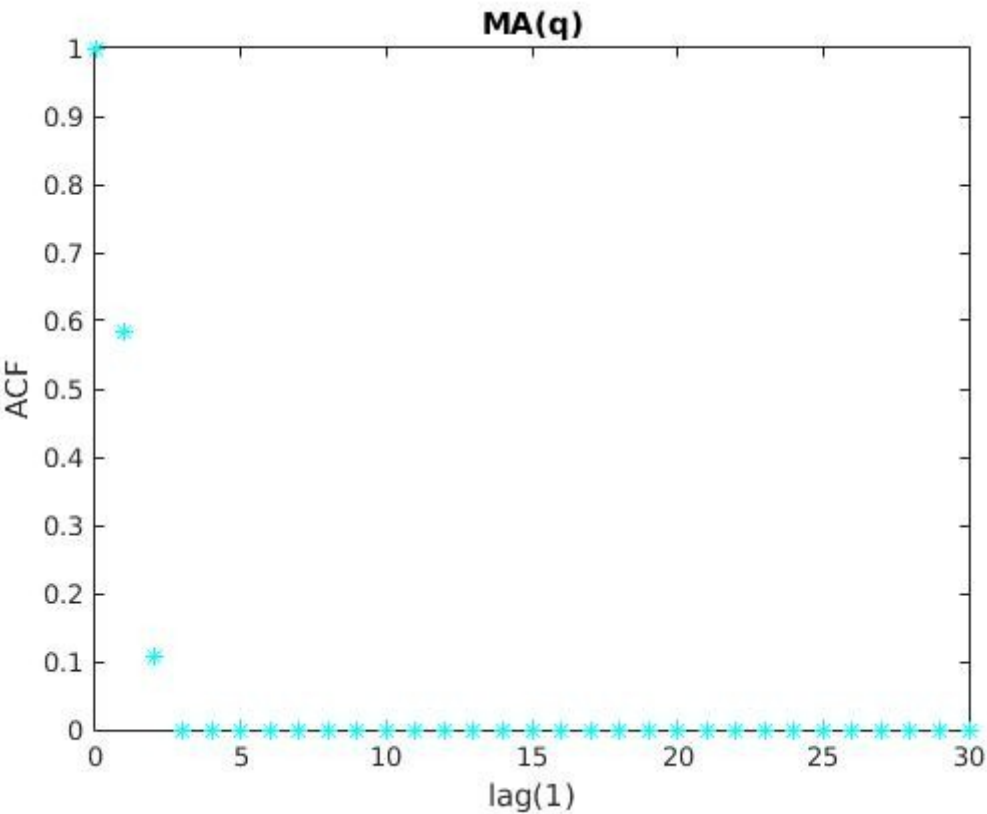
1(a)



1(b):



2(Invertible case)



Code:

```
function dd=Discretef(x,t)
%x is the vector of theta or phi.t is the choose for AR or MA
%If t=0, this function for AR.if t!=0,this function for MA.
p=length(x);

S1=zeros(1,p);
if t==0
    A=zeros(p,p);
    for i=1:p
        s=0;
        for j=i-1:-1:i-p
            s=s+1;
            m=abs(j);
            if m~=0;
                A(i,m)=A(i,m)+x(s);
            end
        end
    end
    b=-x';
    A=A-eye(p);
    S1=(inv(A)*b)';
    for i=p+1:30
        S1(i)=0;
        for j=1:p
            S1(i)=x(j)*S1(i-j)+S1(i);
        end
    end
    S1=[1,S1]
    xval=0:30
    plot(xval,S1,'c*')
    title('AR(p)')
    xlabel('lag(1)')
    ylabel('ACF')
else
    a=1+x*x';
    S2=zeros(1,30);
    for i=1:p
        S2(i)=x(i);
        for j=i+1:p
            S2(i)=S2(i)+x(j)*x(j-i)
        end
    end
    S2=S2/a;
    S2=[1,S2];
    x=0:1:30
    plot(x,S2,'c*');
    title('MA(q)')
    xlabel('lag(1)')
    ylabel('ACF')
end

>>x1=[1.5,-5.6]
>> Discretef(x1,0)

>>x2=[0.2,0.8]
>>Discretef(x2,0)

>>x3=[0.9,0.2]
>>Discretef(x3,1)
```